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TOM CRINGLE'S LETTERS ON PRACTICAL SUBJECTS,

SUGGESTED BY

EXPERIENCES IN BOMBAY.

ORIGINALLY PUBLISHED IN THE BOMBAY DAILY NEWSPAPERS
AS LETTERS TO THE EDITORS.

Bombay:
RE-PRINTED AT THE
EDUCATION SOCIETY'S PRESS, BYCULLA.

1863.

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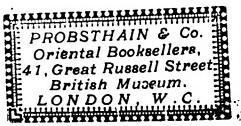


GIFT OF

Archibald Cary Coolidge, Ph.D.

(Class of 1887)

PROFESSOR OF HISTORY



**TOM CRINGLE'S
LETTERS ON PRACTICAL
SUBJECTS,**

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EXPERIENCES IN BOMBAY.

William Walker.

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P R E F A C E.

MANY of the Letters here published relate to events that have passed, and it may be said that their interest has ceased, but as many of them contain remarks of a useful character, applicable "Now as Then," they are reprinted. They are not arranged strictly according to dates for obvious reasons.

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LETTERS

ON

PRACTICAL SUBJECTS.

SPERO MELIORA.

PACKING.

SIR,—Having had a long experience in receiving goods in Bombay of nearly every description from English manufacturers, and some of these goods having been so badly packed that full 30 per cent. of them have been received either broken or so injured as to be nearly useless, whilst others, again, have been quite unsuited to this climate, I have thought for some time back it would be serviceable, both to senders and receivers, were I to make known my experiences, in these and a hundred other matters which materially affect our comfort, our convenience, and our pockets.

In dealing with these questions, I hope to steer clear of any personality or wish to injure any one, although the pecuniary loss which traders and others have sustained in this city would not be credited by those whose careless indifference has caused it. Some people may think I am going out of my road in attempting to right other people's wrongs. But however Quixotic it may appear, I confess to a cosmopolitan feeling of regret whenever I see a fall destroy a vase, a fire consuming property, or a gale destroying a "noble argosy." And my reason tells me, that this feeling is sound humanity; for is not the destruction of property so much capital loss to the whole human family? Let us, for example, suppose that the next American wheat crop proves a failure. Dantzic may sell her wheat at a higher price, but the loss of her crop still affects the pockets of our American brethren, and would prevent them from buying so largely of English broad-cloths; whilst John Bull would be grumbling at the dear Dantzic loaf, which prevented him from buying so largely of Dantzic calf-skins.

Let it not be thought that this long dissertation on *motives* is to lead to equally long criticisms on trade matters, as I only intend from time to time to deal with articles on which I may have cause to remark in the most curt manner my unpractised pen will permit. Some of my jottings may have an acid feel to the negligent, but I also hope to apply the Gilead balm of suggestive recommendation that will heal, and—who knows?—put crowns in the pouch.

TINNED CASES should not have nails driven through the wood into them, or be imperfectly soldered, so that by exposure to rain or ship-leakage the goods may be spoiled.

PLATE GLASS should have an intervening layer of coarse flannel between each plate, and whilst the edges will stand any amount of concussive tumblings, the flat under and top-packing should be elastic, and ample to sustain the weight of the whole package when suddenly turned over. Single package consignments of glass often weigh five cwt., and yet dealers sometimes merely insert two inch-broad slips of tissue or thin cartridge paper to prevent breakage! I have received three consignments so packed, and, as a matter of course, found full two-thirds of the glass broken. I know this is a crying evil of daily experience in Bombay. The packing of brittle substances is a disgrace to British tradesmen.

Bombay, 16th August 1857.

TOM CRINGLE.

PACKING—(continued).

SIR,—In my concluding remarks on packing brittle articles by English tradesmen, published in your issue of the 17th instant, I said that the manner in which this was done was a disgrace to them. I will give a few more instances to prove it.

STONEWARE WATER-PIPES.—The municipal commissioners imported a large number of these about a twelvemonth ago, but they were deposited on the Customs Bunder for a considerable time, and the broken ones could not have been less than 20 per cent. of the whole. Now, a good Staffordshire packer would have nestled these in crates packed in straw, so that scarcely one would have been received broken; and more, by “wolding” the smaller pipes with hay bands, they would have fitted into the larger, and thus have saved freight enough to pay for crates.

IRON WATER-PIPES.—I notice that the Vehar Water-Works have within the last six months received a large number of 30-inch main and others broken. The fault in this case lies with the shippers, or, through them, with the stevedores. And when we consider that the freight alone of one of the large pipes cannot be less than £3, some idea may be formed of the total loss of a pipe weighing some 3 tons, at say £8 per ton. Yet a moderate outlay for a little offal fir would have effectually guarded these “iron pipkins” from breaking each other in a gale of wind. I may be told, that in heavy lurches of the ship they would over-ride each other: true; but not if the upper tiers had been kept down by a stout plank placed across them, and strutted from the ship’s deck above—the struts to have been secured by cleets. Instead of cargo being thus securely stowed, as a matter of justice to the owners of goods, the shippers or captains of ships content themselves with inserting in their bills of lading, that the ship is “not liable for breakage,” &c. If hard weather is experienced, and a more Vulcanian din than usual is heard below during the gale, the captain on his arrival in port keeps fast his hatches till he calls a surveyor on board, who is shown, by the

ship's log, that heavy weather has been experienced, and then, the hatches having been removed, he is asked to certify that the ship's cargo *had* been "properly stowed." And as I never in like cases knew the certificate refused, I can only suppose that negligence of like cases always escapes. I would ask, how can the surveyor know that the cargo was originally properly stowed, when there is a regular topsy-turvy of broken articles? This method of survey may be quite legal, and according to long-established custom, but it is as rotten as a Dead Sea apple.

The Vehar Water-Works are not the only sufferers; the G. I. P Railway about the same time had landed broken tank-plates and water-pipes to the value of some Rs. 3,000, and which could easily have been prevented by a few armsful of shavings or fir strips. A late similar consignment was landed exactly in a like broken condition; but I am glad to hear that the Bombay Committee of Directors will submit to this disgraceful negligence no longer, and have taken steps to recover the value of the articles damaged.

Bombay, 17th August 1857.

TOM CRINGLE.

PACKING—(*continued*).

SIR,—I could fill column after column and not exhaust the subject of breakages from careless packing. However, I will give a few more instances, which, I trust, will draw the attention of those at the head of firms, who, it is to be hoped, will see that the packing of goods for the colonies is properly done.

PLATFORM WEIGHING-MACHINES.—*Rington and Rowbridge.**—Some short time back, one of our Railway Companies had a lot of these consigned to them, and it was distressing to see how they turned out of their cases. Only three out of twenty escaped whole! All the finer castings were so smashed up as to be utterly useless, and others had to be cast at considerable expense in this country to replace them. This was the most culpable case I had ever witnessed. Where goods like these do not tempt petty pilferers, it is far safer to pack in crates, which are so elastic, that rough tumblings have little effect in causing breakage of the contents within; and I feel certain, from experience, that as far as cubic measurement is concerned, a larger amount of goods may be packed in crates than in cases of equal bulk.

WEIGH-BRIDGES—supplied by a firm not a hundred miles from Liverpool. It will scarcely be credited that the steelyard beams for these were packed, or rather I should say *thrown, loose* into boxes, among heavy pieces of castings, some of them weighing 30 or 40 lbs. They came to hand covered with red rust, and in one case the beam shoulders were actually broken off. I wish it to be understood, that not the least covering or sheathing was put on these steelyard beams; they were put into their cases as bare as when they left the fitters' hands.

* Real names ————— and —————.

RAILWAY SEMAPHORES.—I am loath to cast blame on the firm who supplied these articles, as, with the exception of the careless fellow who packed the more delicate and brittle portions, they were packed in the best cases I have ever seen sent to India, and the most careful pains had been taken even to guard the goods from wet, by layers of tarred paper over them. Yet the quantity of glass and finer castings which were taken out broken was vexatiously astounding. *The fragments filled two large baskets.* If any doubts should exist in the mind of the packer, I dare say I should be able to obtain possession of the said fragments, and would send them home to him—said packer paying freight.

Bombay, 19th August 1857.

TOM CRINGLE.

PACKING—(*continued*).

SIR,—With your kind permission, I will continue to give a few more instances of careless packing.

HAND-LEVER PUMPS.—A few days ago, I saw a case opened containing two of these; both were broken from not being packed properly. When I say that they were painted blue, I do so in order that the tradesman who supplied them may identify them, and learn that he has duties to perform towards his customers as well as to himself.

MACHINERY.—I with pleasure bear testimony to the care taken by engine and machine makers as to the manner in which the smaller parts are packed. Yet many of the heavier pieces, which are sent loose, by no means share this praise, as it was only a few days ago I saw landed from the *Tasmanian*, a slotting machine for the G. I. P. Railway, the V slide of which, together with a delicate toothed rack in its centre, was left wholly unguarded from the injury always to be expected in the crowded hold of a ship. Now, if this had been damaged, the Company for whom it was sent would have been quite justified in calling on the manufacturers for another. I conceive it to be the duty of all manufacturers and tradesmen, when they sell an article to be shipped to a foreign port, to settle that their prices shall include good packing, which should nearly defy breakage, and it is their duty to tell their customers what *good* packing is, and how essential to the safety of their goods.

IRON CASTINGS.—I have also seen delicate cast-iron beams for iron goods' warehouses, and long fragile castings for weigh-bridges, sent out to Bombay without that due attention to timber-staying which the manufacturers should have known they required. One piece of the latter I saw broken by the springy motion given to it when conveyed by coolies with slings and poles. It should never be lost sight of, both by sellers and buyers, that when an expensive article is purchased to be sent to a colony 14,000 miles distant, it accords with common sense and true economy that it should be guarded from injury by all practicable

means. There is one remarkable fact which I have of late seen realised, which is, that it is safer to send small castings without being packed in cases, and it is then possible to ascertain who it is, of the numerous persons through whose hands the goods pass, that breaks them.

AXLE-BOXES.—When sailors and porters handle cases, they seem to place unlimited faith on the excellence of the packing within, and tumble them about as if they were bales of cotton. In proof of this, I lately saw landed a large number of axle-boxes for railway carriages. I do not wish it to be thought that I attach much blame in this instance, as they were, with the exception of insufficient iron hooping around the cases, fairly packed for a *home* journey, but not for conveyance to a distant colony. In this instance, there were four axle-boxes in each case, with shaving packing; but from numerous causes the shaving had got displaced and left the thin salient edges of the axle-boxes without protection: the result was, that about 200 of the grease-box slides were found broken, when such of the cases were opened as were not received broken, from not being hooped *completely* around, in place of mere clips at the corners. Now, had thin filmy strips of fir been placed between the axle-boxes, in the same manner that fruit bottles are packed, and a liberal filling of saw-dust after, with complete crossed hooping around the cases, they might have been tumbled from the summit of the Ghizeh pyramid without injury.

I must apologise for trespassing thus largely on your columns; but I am confident, that many sufferers from the breakage of goods received in Bombay, will feel that you do the community an important service by making these facts known, where they are likely to be taken up (in a kindly spirit, I hope) with a determination of amendment for the future.

I hope you will not think I have exhausted the subject, as I intend, with your permission, to continue the "Facts," and soon I hope without the grumblings which have hitherto accompanied them.

Bombay, 24th August 1857.

TOM CRINGLE.

PACKING—(*continued*).

SIR,—Not alone do public companies suffer loss from ill-packed goods. Tradesmen and private individuals are equally victimised by the "packer." I have seen the most costly articles received in a state that would make a saint whisper a * * * * or two. I know a case where a friend received a piece of valuable silk that had been punctured through its many folds by half a dozen ten-penny nails. Another had a whole file of the *Illustrated London News* spiked through with equal recklessness. Many of these goods are packed by the parent firm at home, but the Demon Packer is as busy there, showing how packing ought *not* to be done, (although working for his own

children abroad,) as if for the most casual customer. "*It's a far cry to Lochawe!*" is the Campbell watchword of the "packer."

SODA (Crystals).—The dealers in this salt imagine that, because the flimsy casks they pack in carry it safely, and in a crystallized state from Scotland to London, they are equally fit to ship it into India. The result is, that on opening a cask, importers find that the hot, moist hold of the ship has caused it to liquefy, and out of a ton invoiced, 10 cwt. or so arrive. One wise man determined that his next order should not, Niobe-like, weep itself to death, so ordered it to be packed in strong porter casks. But Mr. Packer was determined to cheat the prudent precaution, by putting it in cheap imitation porter casks, which still left one-third of the order deficient. Its liquefaction is due to moist saline air, and I have no doubt that zinc-lined casks would preserve it in its crystallized state under any temperature.

SOFT SOAP (of Commerce I mean).—A ton of this was ordered, with special directions for good packing. But Mr. *Puck* Packer still had his own frolicsome way of doing wrong. He packed it in cheap trumpery firkins, and then, to hide his evil doings, stowed the firkins in large sugar hogsheads. But I anticipate. When the burley fortresses were first seen in which the kindly packer had bestowed the cherished saponaceous compound, the owner's heart melted towards him, and he left regret for all the hard words which had passed to his disparagement. Under these subdued and kindly feelings, the hogsheads were opened with a keen sense of pleasure, and what was found? One-third of the firkins broken to pieces, the soft soap so slushy, and the remaining firkins so leaky, that 11 cwt. were "bagged" out of the ton! Disappointment dire! Phillip Quarl, when on his solitary island, saw a chest float ashore from a wrecked ship, and heard from its interior the heavenly music of a human voice—hark! surely it is the cry of a woman! He flies on the wings of bright hope, lifts the lid, and in place of a golden-haired Eve to share his lonely paradise, discovers the woolly head of an ugly negro boy!

The packers of Indian goods should wear on their arms a badge with the Dante-like inscription,—

"Ye that 'order' here leave hope behind."

Bombay, 28th August 1857.

TOM CRINGLE.

TRAVELLING CRANES.

"Weighed in the balances and found wanting."

SIR,—The Birkenhead Dock Company have travelling cranes capable of lifting fifty tons into or out of ships! Let us hope that the Bombay Commissioner of Customs will get the old rattle-trap crane removed from the Customs Bunder*, and replaced by a fifteen-ton travelling crane. They are certainly much superior to fixed cranes on a wharf, alongside of which there is no heavy sea to overtax their

* This has now been done.

power by the sudden jerk caused by the falling vessel, when they have about three-fourths of the load to be lifted hanging on the crane. Under adverse circumstances like these, shears are greatly to be preferred, owing to their up and down position, and the catenary curve of the guy acting as a spring to deaden shocks. I have noticed travelling cranes, purchased at great cost, and brought to this country to perform certain work, while, from the large proportion of cast-iron used in their construction, they are quite incapable of doing what they are sold and bought to do. I maintain, that the side-frames or cheeks of travelling cranes should be of good one-inch plate iron.* Wrought-iron cheeks, to carry the jib friction-roller, might easily be made to bolt on to a cast-iron jib shoe, as the wrought-iron would then sustain shocks without communicating them to the adjacent castings. The jib head or pulley casting should not be *hooded* over, as many are, but be left so far open, that the chain may lead in a line forty or fifty feet off, as we often want to pull heavy objects to the crane from a distance before we can lift them. The cast-iron cross-head pillar and bed are seldom liable to damage. With wrought-iron cheeks, the chain-barrel can with safety be brought well out from the cross-head, and thus give room for the chain to pile itself on the barrel. Only a week ago I saw a barrel broken to pieces, and the bearing portion of the cheek on one side broken, from the barrel being too close to the cross-head. The jib friction-roller should be massive, strong, and flush from its tread to centre. A short time ago, I was using a fixed reputed ten-ton crane to lift about eight tons, when, from having an expanded tread to the jib friction-roller, the edges of the roller began to chip off, bit by bit, till the whole of it broke up, splintering into twenty pieces the cheek frames—thus causing an expense nearly equal to a new crane. The balance end of the framing should also be of wrought-iron, and the bottom of the balance-box not lower than the bottom of the framing, otherwise it will certainly be broken. One of the railways here has just received two reputed five-ton travelling cranes,† and they look strong enough to lift that weight; but after the person in charge had loaded the balance-box, and even piled it up with casting, besides placing pieces of iron rails in front of it, together with eight men sitting on and about the balance-box, the crane canted over on its side with four tons. I ascribe this to the cranes having too long a jib. An overhang of the jib six feet from the framing will be found quite enough for all ordinary work with this very useful machine. But the gist of my tale is to come. *Let all purchasers of travelling cranes see them lift their reputed load before they part with the siller!* I believe there are Contractors in Bombay at this present time who, not having done this, have ample cause to regret it. Mr. Editor, do not think that the public in Bombay have no interest in travelling cranes, for they are, and will be more so, of the greatest service in loading and unloading many bulky and heavy descriptions of merchandise into and from railway trucks, and thus cheapen expensive labour, the cost of

* This suggestion has been acted on.

† The day after this was written, the cast-iron cheek piece of one of these was broken.

which would otherwise assuredly fall on the sender and receiver, although perhaps indirectly. Just imagine a batch of heavy guns sent off to Campoolee, where, on arrival, the ever-useful travelling crane plucks hold of, and places them under their several transporting carriages with the most accommodating facility. Lately, the use of one of these travelling cranes to a timber merchant could not have saved him less than some Rs. 150 whilst loading timber.

It would benefit all parties if drawings of machinery, as well as the pictorial advertisements of the various trades, were thrown into packing-cases with goods for the colonies.

Machine drawings would often afford suggestive wants, and these wants would have the benefit of being described in a way best understood at home.

The best form of wharf shears, and travelling and fixed cranes of the newest constructions, are always most useful prompters to purchasers in all countries young in civilization. Then again, there are "Tables of Mechanical Motions," which are highly useful and often dictate the very machine required for a given purpose.

Bombay, 2nd September 1857.

TOM CRINGLE.

IRONMONGERY.

SIR,—It has often occurred to me, that a large and rapidly accumulated fortune awaits the man who would establish an extensive retail ironmonger's shop in Bombay. Two young active men, of good constitution and business habits, with sobriety of lasting durability, together with ample credit on the best Sheffield manufacturers, would soon have a bank balance in their favour that would agreeably astonish them.*

It may be said that there are lots of Borahs who deal in this line. True; but they sell nothing but trash, one-half of which is picked up at auctions. What we want are tools made *to cut*, not merely to sell, like the famous razors of Moses Primrose.

The retail trade in articles connected with house and carriage-building, and especially of machinery-fitting, has increased fully 100 per cent. since 1852, when railways first began to give an impetus to commerce, and which has enhanced the value of labour to nearly an equal per-centage.

An establishment, such as I propose, would be sure to obtain all the chance custom of wants not anticipated by three Railways, the Government Steam Factory, Dockyard, Indian Naval Stores, Gun Carriage Manufactory, Grand Arsenal, Mint, P. and O. Co.'s Dockyard and establishment generally, and lastly, the Commissariat Department, who are always wanting *everything* to send *everywhere*, over a country with a population equal to that of Great Britain, and three times its area. And not these alone : there would be, besides the trades, the civil custom of Bombay, and the amateur workman custom of the army and

* This suggestion has also been acted on.

the Mofussil generally. The articles for sale should be the best that are made for *every-day workers* (the amateur would no doubt give fancy prices for fancy articles). We want every description of planes, the wood of which will *not* warp, and the irons of which *will* cut; hammers that will not split in the face; anvils with good steel-hardened faces; screw augurs with *slow* threads, to give them time to get through our hard tough woods, and with their cutting edges something more than cold iron; pickaxes made of really good iron, and steel-pointed; medium-sized shovels; first-rate fine-toothed hand-saws (we have no use for "pine rippers"); whip, tenon, and all other saws; the very best files in large quantities; every sort of iron and wood drills, with bows (gimlets not much used); a large assortment of wood and coach screws; brass cocks from common beer-tap to 4-inch. We want vast varieties of fancy galvanised wire-work for gardens, for windows to keep out thieves and crows, and on which to train creepers and flowers; the same in larger sizes for verandahs, &c., &c. We want fancy lamp-posts and irons, scroll-work to span entrance-gates, and handsome lamps over them. But as our daily increasing wants are legion, I cannot pretend to give even an outline of the numerous articles which our ironmongers should have. If any one should feel inclined to make his fortune, let him get some mechanic (none other should be trusted), who would mark off from printed lists what articles are wanted in India. But even the mechanic will be found wanting if he be not just landed fresh from one of our Indian railways or Government Departments, and is not an observant intelligent man. If he be all these, then may you confide your selection to him, pack up and send them by the Cape, whilst yourself and partner came overland as second-class passengers. Select and fit up your premises, and advertise your business, which may be done in two months, by which time your goods will have arrived. Have your shop neat and orderly, with everything in its place. Sell first-rate articles on the "small profits and quick returns" principle. Let not an article go over your counter without prompt payment, except to Companies and the Government Departments: this practice may lose you a little opening custom of dubious benefit, but it will, in the end, save you a world of writing, book-keeping, and health-exhausting anxiety.

Who will step in and enjoy this Canaan overflowing with rupees, selling *good* ironmongery at moderate rates?

Bombay, 7th September 1857.

TOM CRINGLE.

GUTTA PERCHA AND INDIA RUBBER.

SIR,—As there are many articles sent to India which so quickly deteriorate by climate that they shortly become useless, I consider that I am doing good service to both manufacturer and purchaser if, by pointing out instances of unfitness, it may possibly lead to an alteration in the manufacturing process, so as to fit them for the uses they are intended to serve.

GUTTA PERCHA.—Civilized man has derived so many important benefits from this valuable gum, by its serving as an insulator for telegraph wires across oceans, which it would have been impossible to span without its protective aid, that it becomes the duty of every one to extend its sphere of usefulness. Manufacturers, acting with this view, have made ewers, wash-basins, bath-pans, &c., some of which were reasonably thought suitable for the rough usage of camp life in India, owing to their lightness, elasticity, and durable character. But it is a fact beyond dispute, that gutta percha perishes of a dry crispy rot, induced, I think, by our dessicating easterly winds. It has also signally failed as a covering to electric telegraph copper-wire for underground purposes. It becomes so brittle, as to break with a snapping sound when only moderately bent. Yet notwithstanding this drawback, manufacturers may discover a method of giving it an admixture of some substance, which, without destroying its insulating properties, may impart a fixedness of pliability, which our eight months of parching climate may fail to affect. Even if this should not be realized, there is room for congratulation, in knowing that when immersed in the Red Sea (as I hope it soon will be) as an insulator to our Indian Ocean Telegraph, it will there serve us far more usefully than in the shape of ewers and basins, though we had to perform our ablutions in cocoanut shells.

INDIA RUBBER.—Although it retains its elastic properties longer than gutta percha, yet it perishes much like it, and from the same cause. The unvulcanized rubber even becomes an inelastic sticky mass, longing for a run into fluid, like some of our London-made sealing-wax, which many a Red Sea voyager has found in his writing desk to have changed its form from the comely stick to a “toffy” cake shape, reminiscent of sweet-tooth days.

India Rubber Tubing, with its spiral distending wire of common iron, is a great mistake, as the wire soon corrodes in this corroding climate, and thus hastens the destruction of the tube. It would cost but a trifle in addition to have all tube-distending wire galvanized, in which state it would be preferable to copper-wire.

India Rubber Air Beds, however lasting they may be in a more temperate climate, soon begin to show signs of failure here by a wheezy expiration of air, like the treble note of a toy-dog, so familiar to nursery recollections.

Air Cushions are subject to the same *Æolian* complaint, and, like a bad fire, are frequently in want of the bellows.

If there be truth in what we read in the scientific journal as to the adulterations practised in the manufacture of articles from caoutchouc, it will be found much better policy to send the genuine article to India if manufacturers wish to retain our custom.

I have had a vulcanized India-rubber packing-ring for a steam engine in my possession for seven years past, and it is as good and elastic as when made, which I think is a fair proof that it is owing to adulterations, or probably an insufficiency of sulphur in the manufacture, which affects the durability of articles made from it and used in India.

Trowser Straps are particularly prone to rot. A day's walking in wet weather, and then laid by for a week, finishes them. Their then appearance would indicate that the sulphur had been washed out of the material—that is, if any had originally been used in their manufacture.

Bombay, 11th September 1857.

TOM CRINGLE.

IRON BLOCK AND IRON WORK FOR SHIPS.

SIR,—Either iron in this climate undergoes a very considerable alteration in its cohesion of particles, or manufacturers make the strength of hooks for iron blocks sent here considerably below the weight they are professed to carry. This is the more to be regretted, as most of the iron blocks I have seen, and had to deal with, are otherwise of the first workmanship, and my object in noting them in these letters, is with a view to get more strength in the hooks, which are at present so weak, compared with the other parts of the blocks, that it is quite a time of anxiety when lifting a heavy weight with them. Blocks I have lately had in use were supplied to lift twelve tons. The throats of the hooks *before use* were *two* inches wide, but after the first lift of ten tons they opened out to *four* inches, thus throwing more of the weight, in after work, on the side of the hook already weakened by straightening. Had not the iron been very good, the hooks must have broken, to guard against which they were taken out and replaced by eyes. Here we see mechanics (or masters), who scarce put hand to the manufacture of anything but iron blocks, yet fail to give strength in the most essential part—the hook. I have also by me some beautiful brass-sheaved highly-finished iron blocks for lighter work; the hooks of these do not show much judgment in the manufacturer, as I feel confident that a ton and a half would straighten them, whereas the shell and sheaves would carry four tons with ease. It makes one regret to think that long practised labour should be so indifferent about learning its narrow field of work.

I would advise any one who may order iron blocks for lifting great weights, never to trust to a manufacturer for giving proper strength to the hooks, but to give special dimensions, and have two hooks, leaning back to back, with straight shanks, hanging from an eye-swivel common to both. The main defect in the hook is want of a roomy *seat* or space for the chain slings to rest on without sliding towards or pressing against the point, which of course is the weakest side of the hook: in a word, we want less elegance and more metal at the bend,—the strength carried closer to the point of the hook. This applies more to the lower block; the upper one should always have an eye of two-inch iron (if to lift from twelve to fifteen tons) attached to a swivel, the eye to be nine inches in diameter. If the upper block is merely hung from a common rigid loop without a swivel, it will not turn to its work; and

when this is the case, working a rope-yarn over a nail will be a fair parallel of the ease with which a chain-fall will “*ratchet*” against the cheeks of the block.

IRON-WORK FOR SHIPS.—The block hooks sold in marine store dealers’ shops, are a fair sample of the disgraceful running gear iron-work supplied to ships, and which has sacrificed the lives of many poor sailors when battling with the gale. Shipowners, look to this! If you don’t know good iron from bad yourselves, you can order the *best* to be supplied (by far the cheapest in the long run), and when all your iron-work is supplied (unvarnished), give a good mechanic (who knows nothing of the manufacturer) a guinea to inspect it for you. You will never spend a guinea more profitably.

CHAIN CABLES.—In gossiping about blocks, I find I have got on board ship, so I will say a word or two about chain cables. When it is considered that these costly articles range up to some £500 each for large ships, it is really surprising that more care is not bestowed on them in every ship, without exception. Yet I have seen ships’ cables so seamed from corrosion, that, had I been the owner, I should have said to **CAPTAIN CARELESS**, “never more be officer of mine!” I was once riding off a lee shore in a tremendous gale, and when giving the ship cable, have seen kinks come up from below cemented together with rust, and nothing left for it but to let them tear their way round the bits, and grind through the hawse-hole, whilst our lives hung in the balance during the perilous moment, when not a swivel would turn, or a shackle-pin start.

My remedy for such a state of dangerous neglect is this. The chain locker should be of iron, water-tight, with a screw-plug at the bottom (the use of the plug I will presently explain). Let each ship be provided with an iron cask, to hold say 30 gallons of linseed oil, the cheapest that may be purchased. When a port is left, and the cable unshackled, after being dried and cleared of its mud, pay it down into the locker, put the iron cask of oil on the galley fire, and, when boiling hot, pour into a vessel with a perforated nozzle, and *rain* it over the whole of the cable, and the work is done. When you discharge cargo, and can get at the bottom of the chain locker, put the cask under the plug-hole, unscrew the plug, and you draw off nearly all the original quantity, to repeat the process when you next leave port.

By this practice I would engage to keep a chain in first-rate working order, and make it last out two or three ships. The oily chain will soil the decks a little, but will nourish the wood, and *do good to owners*,—the watchword of all good captains.

I know many first-rate captains of ships, who are at the pains to black varnish their cables; but I never knew black varnish retard corrosion in the hot moist hold of a ship. Rust *will* form under the varnish, except it be put on boiling hot, whereas my plan oils every part of the cable with very little trouble, and even forms an oil-bath for the least used part of the chain, which is most subject to corrosion.

Bombay, 13th September 1857.

TOM CRINGLE.

MECHANICS—EUROPEAN AND NATIVE.

SIR.—Those who are not personally engaged in the daily struggle of keeping the mechanical arts supplied with their ever-recurring wants, can have no conception of the difficulty of supplying their wants. A short three years since, if the blacksmith's art were required, there were dozens in the bazar eager for the job : all this is now changed ; every mechanic who is worth having has been sedulously sought out and transplanted into the workshops of the railways, the Government manufactories, railway contractors, coach-builders, &c., &c., and still the cry is “more, more!”—but as black *smiths* don't grow on hedges, there is nothing left for it but to wait patiently until Dame Nature grows, and man trains, the rising generation. But can we wait ? Is all progress to limp on at a snail's pace because the mothers of the blacksmith caste don't bear twins every year ? Then again, it is the general complaint, that there is no dependence to be placed on a native labourer adhering to a master, however kind, if an extra rupee per month is obtainable elsewhere. A master may employ an indifferent smith, and teach him all the finer branches of his art, only to learn some fine morning, after pay day, that he has just lost his *fiftieth mother*, and is busy burying, not his maternal parent, but all recollection of the gratitude due to the master who has so trained him that he can command the coveted rupee elsewhere, and which probably his employer would freely have given had it been asked.

TINMEN OR TIN-WORKERS.—So it is, more or less, with all native labour which requires special training. I employ a native tinman who can turn out work nearly equally to best English, and although he is always steadily at work, yet he cannot execute my orders within half of my requirements. I say to him,—“Why don't you train more workmen and extend your business ?” He replies,—“So I would, but directly they found themselves masters of their tools they would leave me, and set up an opposition shop.” This fear of trade rivalry keeps every branch of the native mechanical arts at a low ebb. The man whom I have instanced, received *his* training in the P. and O. Company's workshop, else he also would no doubt have been a maker of the ugly unsymmetrical lot of tin trash we see in the bazar worked up from old tin packing-cases ; but having received an English training, he stands alone, the only good tin-worker in a city of 750,000 inhabitants.

BOMBAY SCHOOL OF INDUSTRY.—What is our School of Industry about ? Why not train its pupils in the *most useful* branches of the mechanical arts, such as blacksmiths, carpenters, tinmen, plumbers, iron and brass-founders, &c ? Let such small gear lie by as bad weaving, rope-making, and pottery : of these we have more than enough outside. For this institution to effect all the good which its benevolent founder and supporters could wish for, it must be furnished with skilled European *workmen* teachers ; thus well set a-going, it would in due season turn out a stream of skilled workmen to supply the fast growing demands of the labour market, whilst pursuing its original

design of rescuing youth from crime. If thus managed, this institution, like the Jail of Jubbulpore, would be self-supporting after a while.

But the *present* is our pressing time of necessity, and I have thought that as merchants, &c., come to Bombay to make fortunes under the *tyrannical rule* of poor, much abused, *Koompanee Jehan* (may his shadow never grow less!), why does not some mechanic capitalist bring out machinery (duty free here) for working the following branches, viz., engine and machine "fitting" in all its branches, brass foundry, iron ditto, plumbers, timmen, blacksmiths, a pattern-maker, two good carpenters? I can promise him incessant work from the public in every branch I have named. At present we have to sue and pray for our work to be put in hand. To give employment to such an establishment as I have proposed, there are eight cotton presses, ten cotton-spinning companies, the surplus work of three railways, swelling to the goodly proportions of 2,000 miles, five steam-boat companies, the iron and plumbers' work of 100 ships in the harbour at one time, the metal wants of 750,000 inhabitants, the work of assisting to replenish the rifled arsenals of Central India, and lastly, on comes the jolly sirloin in the shape of a goodly Commissary General, who will throw you down an order for a few thousands of iron bedsteads, a few hundreds of iron camel side-chairs for sick and wounded;—nothing should surprise you in *his* orders, from a camp baking-dish to a twenty-ton crane. He is always wanting everything to send everywhere: for instance, if you could manage to stir up a war with some mountain tribe Sind-ways, the following day reckon on an order for a thousand zumburuks, or camel-swivels, and so on. I won't tell you the fabulous prices (coupled with the begging) we pay for work. Put a Napierian kit in your carpet-bag, run down to Southampton, and step over and see, mark, learn, and pocket the profits. Above all, don't think, because my pen is not tasselled with crape, that my statement is incorrect. I also have to request that all capitalists under £10,000 will skip this letter, as it is necessarily addressed to ten-thousand pounders. Our want-difficulty is a huge spike, requiring a Thor-hammer to drive it effectually home. A small capital would sweat itself to death whilst climbing its way to an efficient settlement to work.

ENGAGEMENTS WITH ENGLISH MECHANICS.—Should any lucky man of *metal* give his attention to this with a view of "inheriting the land," he will do well to engage men of not less than thirty and boys under 16 years of age; if the former be married and they wished to bring their families, so much the better. Study well the men you bring out. Let their sobriety, industry, and stedfastness of purpose be undoubted. Rather bring men of this caste than more showy workmen. If you can give them a *labour-profit* share in the work done, by *all means do*. If you don't know of a system by which you can do this, invent one. Study the French systems of "*commandite, commanditaire, communism, socialism,*" and all other *isms*. If you can arrive at a plan, explain it well to your men, supply them with copies to read at leisure, be sure they understand *you* and *you them*, then sign and seal, and end in

stedfastism. Be a jolly, good, strict, kind, liberal, sympathizing master to them, and there will be little fear of them leaving you to make bricks under Pharaoh. It would scarcely be necessary to tell your men that the capital invested in your workshops and machinery must have its share of labour-profits, and that you personally, as being a skilled mechanist (and you must be one), would be entitled to a higher rate of wages for *workman* abilities—not *gentlemanly*: not that we don't hold the latter qualifications in the very highest estimation, but they are a sort of private property, ranking with your diamond shirt-studs, gold snuff-box, Arab-riding horse, &c., &c., to be especially and personally enjoyed whilst your tired Vulcans are washing the forge-dust from their faces.

If you would prefer to be the “boss” on the usual English system, you must be prepared to pay your men well to prevent them leaving your service. I will not suppose you to be so foolish as not to know that in the labour market, if another can afford higher wages (always a sign of a thrifty trade and high prices), you should be able to do so likewise, and thus retain your men.

TREATMENT OF ENGLISH MECHANICS.—You must also bear in mind, that although mechanics at home are content with their class position in society, where the margin of every grade is well defined, on landing here he immediately finds that, as an Englishman, he belongs to the dominant class, and however humble a member he may be of that class, he expects a treatment and mode of address in accordance, so that his personal position and nationality may not suffer in the estimation of the natives around him. He can here measure his mental and mechanical abilities with the native workman, and is not slow to discover his superiority, which he expects shall be duly recognized by cordial greetings when the master visits the shop, by a friendly sympathy when sick, by kindly inquiries after absent wife or children. It is these little gentlemanly and benevolent amenities which sweeten the home-severed European mechanic life in India. A master of English workmen in this country had better stay at home, or go and tend the Skerryvore Lighthouse, than bring any icy superciliousness eastward of the Cape. He must leave it at home, or rather he should never have been afflicted with it, if he wish to gain the love, esteem, and earnest good will of English mechanics in India.

Perhaps it will be well to explain to people at home, that this expectation of deference, so well known to all persons here, who don't go about with their eyes shut, is not owing to any undue assumption individually, but is *sure* to be expected by *every* Englishman, of whatever character or disposition, after a week's residence in India; and I submit, therefore, it should be viewed as a natural and proper feeling.

Wisdom is God's gift, irrespective of birth or position. If nature has denied, man cannot acquire it. He may don the armour of education, to assist in piloting him amongst the rocks and quicksands of life, and yet not be wise. It is from this undeviating law of nature that we meet with foolish workmen, who assume, with a kind master, too much

familiarity ; but if the man is an earnest, industrious, good workman, and mindful for his master's interest as for his own, a little philosophy will let these breaches of good manners blow by. But to submit to it from a lazy, drunken, worthless, grumble-to-do-his-duty-when-ordered pig, never ! Drive the hound from your works as quickly as you may, as a disgrace to the honoured name of Englishman, and as an exhauster of your health and peace ! Nevertheless, masters should recollect that if familiarity begets contempt (in coarse minds only), sympathy begets love and respect, and is the lever of success with most men.

But the battle of *assumption* for "position" in India is the most curious and interesting psychical study which a contemplative mind could desire. It is most rife in the upper edge of the lower class of European life in India. The protean shapes it assumes are wonderful. One remarkable fact, connected with those battlers for position without merit to deserve it is, that there is a *crack* in each of them. You may be some time in finding it out, but I'll wager my life that you *will* find it. Look at all the clever European Heads of Departments, all sensible men with plenty of mind-ballast on board, whom no step-by-step success has so intoxicated as to have caused them to cast their ballast overboard, and so drift to leeward—to begin and end again.

Some of the class I aim at astound your Saxon modesty by such an assumption of official impudence as to make you laugh : you need not get angry ; only wait, and you'll see your peacock come tumbling to the ground with a flump that enlists your pity.

Others come the stiff-collar and Albert-tie dodge, (look out, Marwarees !) and end in a bolt to Kurrachee. Others would not be seen in a hack buggy were their masters' lives dependent on the *degradation*. In a word, this class depend solely on little outward accessories to hide mental deficiencies, and make an impression on weak minds who are to be taken in by such dodges. They implicitly believe in Lord Chesterfield's maxim—*If you are not, seem to be.* A man of the world is only to set these machines talking, in order to know all about them. They cannot understand how George Stephenson should have been such a genius, with such dirty hands and a horrid limp collar !

Bombay, 19th September 1857.

TOM CRINGLE.

LAMPS BADLY SOLDERED.

SIR,—Soldered lamps received from England are remarkable for going to pieces when used in this country ; but lamps soldered in India stand remarkably well. I would not have it thought that I impute blame or seek to depreciate the really elegant and good tinware manufactured in England. I have had too many instances brought before me to have any doubts about the truth of what I state. I have often thought that the defect may be owing to the difference of temperature between the tin and the solder when applied, say in

mid-winter. This may appear a lame reason, but it is the best I have to offer, and I merely mention the "fact" that if it should catch the eye of the "Trade," they may probably arrive at a truer solution than I have ventured to offer. Connected with this subject, I may mention having received from England three large oil cisterns, which, when filled with oil, caused the solder to part, and a large quantity of oil to be lost, happening as it did on a Sunday, when no one was present. These cisterns, now re-soldered in this country by Native workmen and *English solder*, are as tight as a glass bottle. What the plague can cause it? But, Mr. Tinman, now I remember your tin packing-cases are so lightly soldered that mostly it is only necessary to lift a corner of one side the length of the case, and rip the solder apart from end to end as easily as if it were brown paper. But I will be charitable, and put this also down to difference of temperature. Nevertheless, I advise you to look to these things, as owing to these defects I have been at the pains already of stirring up our Native tinmen to essay their prentice hands on *every description of railway lamps*, and I must confess that they imitate your elegance of form and deft contrivances to a T, besides giving greater strength and more durable soldering.

OIL LAMPS NOT VENTILATED.—It is a great oversight that all closed lamps should not be better ventilated than we find them. Often, when the attempt to ventilate is made, it is so managed that during heavy gales the light is extinguished. This may be easily cured by means of tin shields, soldered on so as to deflect violent currents of wind,—the *how* may be easily tried with stiff brown paper, &c. I recollect when in charge of two steam-boats, and a large pier, on which latter thirty-six lamps were lighted nightly, the heavy north-east gales which sometimes blew down the river used to extinguish every light, until I had slanting shields soldered just below the ventilating holes, when not a light was blown out. I recommend this hint to the Board of Conservancy when they shall feel disposed to put up lamps and iron posts which are not a disgrace to Englishmen who had anything to do with the (*elegant and difficult to replace*) articles along the Esplanade road. I am going to put up one as a pattern for them.

All English lamps sent to this country should be provided with an extra amount of ventilation, for it is a fact that the brightest light-giving argand lamps in Bombay are of a cheap but excellent American manufacture, where particular attention has been paid to this all-important essential. As I am partial to a bright light, I will venture two or three little hints of treatment, which may be useful to those who share my liking :—

1st.—See that your cocoanut oil is clean and pure; the cotton not too tight on its barrel, or the fibres of the cotton will not be loose enough to syphon up the oil to support combustion.

2nd.—If your lamp gives a long, yellow, sickly flame, see whether the oil-dripper, which screws on to the bottom, is full of oil; if so, empty it. Or probably you have got a wick which being too long,

reaches the bottom of its well, and intercepts the free flow of oxygen which should feed the inner circumference of the flame.

3rd.—When your lamp has burnt long, and the oil is low in the well the light often burns dim ;—hem ! wants more oil. More oil is given, and you turn up with the full assurance that *now* you are to have your favourite bright light : not a bit of bright light follows the turning up. You turn up higher, to see what comes of it, and, like the Arabian fisherman with the uncorked-bottle demon, you raise a devil of a smoke ! “Mussal, take away that cursed lamp!”—I follow him, take off the chimney, clip off the *charred* edge of the wick, and say “Take it back to your master.” “Well, Rama, Kysa drooskyá (how have you rectified it) ?” but Rama gives a gracious smile of knowing intelligence, deposits your lamp, and departs, determined to hoard (like rupees) all his little scraps of knowledge, in order to make his services the more indispensable to his master.

TOM CRINGLE.

THE ATLANTIC TELEGRAPH CABLE.

SIR,—All who take an interest in man's onward progress have great cause to regret that the Atlantic telegraph cable should have broken in the process of laying it down.

Hints are given in the *Times* that the breakage was due to mismanagement on the part of some person engaged in the work. This may be true or not ; but from the description given, one is led to the conclusion that, loaded as the cable brake was, the severance should be ascribed to the velocity the cable had naturally acquired when suspended over such an enormous depth of ocean. We are not told what angle the cable assumed as it was payed over the stern of the ship, but probably the angle would be equivalent to an additional thousand feet of the suspended cable.

It has been suggested that the cable should be floated by means of buoys, or that a second vessel should follow, bearing up the cable, and allowing it to pass through a ring. The first would be enormously expensive, to say nothing of the difficulty of attaching the buoys ; and the last plan would, I think, inflict a greater strain on the cable than when first delivered from the carrying vessel's hold. It also appears that much greater length of cable was payed out than the actual distance traversed by the ship, and it must consequently have fallen on the ocean floor in a series of irregular coils, and not as it should have done, in a straight line. From the description given, it would appear that all went well until extreme deep water was attained, when commenced the accelerated run of the cable as compared with the speed of the ship. The brake was then repeatedly loaded to check the velocity of the out-flying cable, until it parted. It is stated that this might have been prevented by easing the brake, as the sea lifted the ship's stern. But would not this have allowed the cable to increase its velocity, and which

velocity would require an increased curb when the lifting ceased to operate?

When all the facts attending the delivery of such a mere thread as the cable is, compared with the huge ship acting on it and armed with the restrictive grip of the brake, are considered, I cannot but think that a wider-spread retarding power is needed, of less harshness than the cable brake affords, and one that would exert its retarding power until the cable deposited itself on its bed. Landsmen may laugh at my suggestion, but few seamen will.

My plan is to have canvas tubes made, six inches in diameter and twelve inches long. One end of the tube to be tied up, and then turned inside out. The other end to have a distending hoop sewn to it, where two eyelet-holes should be made opposite each other, to receive a short lanyard of slightly twisted hemp, the other end of the lanyard to be tapered off fine. When about to be used, the ends of the lanyards should be placed in a tub of water close by where the cable is payed over the stern. This would make the ends extremely pliable. We will now suppose the cable to be running out over the friction-roller at the stern of the ship : a man would place himself so that the outgoing cable would be on his right, just "in board" of the roller, and on being supplied with our little *canvas bucket* (by a man stationed at the tub), he would seize the bucket in the right hand as he would a small whip handle, and give the tapered wet end of the lanyard a dexterous oblique whisk around the cable, so that the convoluted turns would coil themselves to the *left*, and not quitting his hold of the bucket till he had passed it over the friction-roller. A seaman will know that when the bucket reached the water, the lanyard, thus attached, would form a sort of "Blackwall hitch," and would never loosen itself, however great the strain, unless the lanyard broke. These little buckets thus attached would act as a retarding brake, from the water entrance point to the ocean floor. If pieces of wood were used, with a view to retard the descent of the cable, the air would be forced from the wood by compression before a depth of, probably, 1,000 feet were attained, when the *floats* would be converted into *sinks*.

The canvas tubing might be made (like the old ten-gun brigs) in great lengths, and then cut up, as required. And for special unruly cantrips of the cable, a much larger retarding bucket might be attached with certain success. And it should be borne in mind that, as these retarding buckets would only be required in the extremest depths of ocean passed over, the expense of the buckets would not be so great as at first view might appear. I may be excused for repeating again that what is wanted is not the harsh unyielding cable brake as the sole retarding power, but something soft, like the magic touch of a skilful rider's hand on the delicate mouth of a horse, as compared with the dead pull of the untaught horseman.

Bombay, 25th September 1857.

TOM CRINGLE.

MANUFACTURE OF OIL.

SIR.—In my first letters, which you were kind enough to publish in the *Bombay Gazette* of the 26th August, I intimated that although there was much to condemn in the packing and fitting of goods for the Indian market, I also hinted that there were Pactolean streams of wealth in India, which only required rocking in the cradle of industry a few short years to grow into the comely shape of rupees. Of these I have pointed out two, which all practical men, acquainted with our daily wants, declare are ripe for the gatherer.

I now give a third ;—the veritable pig with the knife and fork sticking in his juicy sides, asking only the favour of being served up on the altar of Fortune. Perhaps *most* of my English readers have read of this wonderful member of the porcine family.

Our appetising episode is given merely to shadow forth the fatness of the land to the OIL MANUFACTURE.

If Australia has her gold mines, Western India has her seed harvests, so vastly prolific that in four years hence, when our North-Eastern Railway branch shall have tapped the cereal treasures of Khandeish, she will be able, single-handed, to supply the world.

Four years ago Bombay exported only 4,000 tons of seeds, whereas now it has reached 60,000 tons. Of these linseed forms about two-thirds, and the Bombay demand for the oil expressed from this seed alone is something enormous.

The writer of this is just about to send to England for 2,000 gallons, because Bombay cannot supply it of good quality. Our three Railways, two Steamboat Companies, the whole of the Government Departments, including their Dockyards and Indian Navy, a hundred Merchant Ships always in the harbour, a Steam Flotilla on the Indus, the wants of this city of 500,000 inhabitants, with its coach-builders, &c., have to be supplied. There is also the custom of all the Mofussil towns and cities, together with the convincing fact that the powerful sun has such a scorching effect on our wood-work of every description, that if not painted it is warped and cracked into fissures ready to let in the monsoon rain. I, therefore, ask oil manufacturers why they don't establish their trade in Bombay, where already exists such a great demand for oil of every description, and where there is every facility for working it to a most successful issue. One English foreman will be ample to superintend a large establishment in this country, where the natives, for work of this character, would be found even more efficient than Europeans. Mr. Manufacturer, although unknown to me, let me address you personally. If you should be the happy individual to first discover this treasure trove, don't attempt to dig unless you have a capital sufficiently ample to build a good roomy factory, so as to enable you to do business on a pretty large scale, but not *too* large, till you see your way clearly; but I can promise that, if you are industrious and energetic, it will not be long ere that takes place.

We have land in abundance here alongside the railway, with a railway siding for you directly your business will warrant it. This railway communicates with the seed-producing districts of the interior, and will put the seeds down at your mill-door, The ground-shed style of building would answer your purpose best at first, and as your purse and pride swelled, you could build a palatial-looking oil-mill that would "astonish the natives," and extend your business and bank balance. Your sheds would then become out-houses, to store additional produce. I shall consider I have done my part towards you if I give the prices of seeds and labour, &c. On *your* part, I take it for granted that you *practically* understand your business; that you don't think oil-mill stones, hydraulic presses, oil-boilers, roasting-cylinders, and all other implements of your trade, grow on our castor-oil trees—for they don't; so you must bring them with you, and everything which you *know* you will want, let foreign customs be as erratic as they may. I would advise your using bullock-power at first for your crushing-mills, but before you leave England you may fix your choice on any machinery you may think suitable, so that when you have measured your strength with the *opening* battle, you can then order your machinery with the full assurance that it is just what you want.

PRICE OF SEEDS.—The following is the present Bombay price of seeds:—

Linseed, per cwt	Rs.*	5 to 6
Rapeseed, do.	"	4½ to 5½
Teelseed, per candy of 5½ cwt. ..	"	20 to 27

Copra (stripped Cocoanut)—

Red, per candy of 5½ cwt.	"	54 to 60
Black, " "	"	55 to 60

The loss in weight in cleaning linseed varies according to sample. On a good lot, the loss should not be over 5 per cent.

The loss in weight in Kurrachee rapeseed is usually about 4 per cent., in Kutch and Kattywar seed it is very trifling.

On Khandeish Teelseed the loss is about 3 per cent.

Cleaning expenses come to about 2 as. (3d.) per cwt., but if done by machinery on a large scale, these could be greatly decreased, and should not exceed one anna (1½d.) per cwt. You may calculate another anna (1½d.) to cover weighing, carting, &c. In copra there is, of course, no loss in cleaning. The red kind yields most oil; the black, being used for food, is dearer.

Seeds are very dear at the prices quoted. For instance, I have known linseed cost less than four rupees per cwt., and not very long since it was down to nearly that price, and other seeds in proportion.

* One rupee is equal to two shillings, sixteen annas make a rupee, twelve pies make an anna.

LABOUR RATES, &c.—Our bullock carts will carry 15 cwt., and can be hired at Rs. 1½ per day.

Bullocks' keep	each Rs. 10	per month.
Driver's pay.....	" 5	"
Overseer, or Muccadum.....	" 8	"
Labourers	" 7	,
Your European Overseer would expect..,	200	,

You may tell me that you know your old foreman will go out with, your for half that sum : true ; but he won't say so here, till the "Bombay House Building Company" sets to work, and builds a hundred houses at rents of Rs. 25 per month, besides divers other little reformatory wanted, and for want of which expenses bear with nearly an equal weight on Rs. 200 salary as on Rs. 500. Coal "breeze" can be had very cheap for engine fuel, &c. Your bullocks will keep fat and in good condition on a portion of oil-cake, together with hay : the surplus cake not sold here you will ship home. Freights average £3 per ton. They are now at £2·5-0.

Porter casks for shipping oil can be purchased for Rs. 3 or Rs. 4 each and in any number.

PRICES OF OIL.—Prices of oil in Bombay :—

Cocoanut Oil, per maund of 28 lbs	Rs. 3 10 0
Castor "	2 15 0
Jingeely (Sweet) "	3 12 0
Linseed Oil "	3 0 0

The linseed oil imported from England is very inferior, unless specially ordered from respectable manufacturers. All our oils have risen in price 50 per cent. within the last five years, and are still rising.

All *improving* machinery is admitted *duty free* by that monster John Company, whom people say is zealously employed in throwing cold water on all improving efforts. If you bring machinery, bring out a fitter to erect it, after which you can agree to part with him if no longer required ; he can immediately get other employment.

Bring your own fire-bricks and fire-clay. We have here good lime, and building-stone equal to granite. Common brick to be had of fair quality, made by an Englishman.

I have now given you a grain of mustard-seed. Come out here, plant it in our soil, and water it with industry, when it will grow to a goodly tree, in the branches of which you can build a snug warm nest.*

Bombay, 29th September 1857.

TOM CRINGLE.

MERCHANT SEAMEN.

SIR.—The insubordinate conduct of British merchant seamen is now so bad, and is progressing at such a rapid pace for the worse, as to excite the attention even of landsmen, who can, however, form but an imperfect idea of the miseries this insubordinate conduct

* A large oil mill has since been established in Bombay.

inflicts on commanders of long-voyage ships. The Mercantile Marine Act of 1850 has seemingly surrounded both seamen and their captains with laws for the protection of their respective rights; yet since these laws have been in operation has the semi-mutinous conduct of seamen been at its worst, whilst the education and gentlemanly bearing of the mercantile marine officers has most certainly improved, and that in a most marked degree. Not only has the *conduct* of seamen deteriorated, but they are deficient in seamanship as compared with sailors of ten or fifteen years ago, and to an extent which is quite startling to old salts. I do not exaggerate in putting forward these opinions. I feel confident that their truth can be vouched for by many foremast hands themselves, and certainly by all commanders of ships now serving, as well as by those who have retired from a maritime life.

A few years ago it was quite a common occurrence to meet with sailors who had served in one ship for four or five voyages; whereas I will be bound that were the one hundred ships now in this harbour searched for a similar instance of Jack's attachment to his ship, it would not be found. The modern merchant sailor ships in a vessel for a foreign port, and as soon as cables are unbent and anchors stowed, he is ready for his game of insolent insubordination, with a view to his discharge and re-entry into some other service that may captivate his vagrant fancy. To attain this pre-arranged end, some restless bully-boy of the crew will inoculate the whole of his shipmates with the same fever of change, and guide their delirious efforts to attain it even to the verge of actual mutiny, as was shown in a late trial at the Supreme Court of Bombay, when such a tale of horrible contemplated villainy was sworn against the two prisoners, that it forced the hearer to imagine he was carried back a hundred years, listening to the trial of Captain Kidd, or of a Spanish pirate of the Isle of Pines. Yet, bad as these men undoubtedly were, it was perhaps well they escaped the fangs of the law, otherwise the contagion of example, acting on minds equally ignorant, might have led to the actual perpetration of deeds which, in the case alluded to, were fortunately only designed to be discovered and crushed in the bud. Without entering into the revolting particulars of this trial, it will be enough to say that the grand object these misguided wretches had in view was to seize the ship's boats, and land on the Malabar Coast wherever the ship might make her landfall. But I can assure any future would-be mutineers that, quiet as that coast may appear to a sailor just sighting land after two months' sea view, a mutinous boat's crew would hardly have made their Crusoe imprints on the sandy beach before they would be scampering through the wild woods, not "*chasing the Buffa-low*," as their old sea-song has it, *but being chased* by the district Collector's police, who would catch, tie, and sling them on poles, like Mahim pigs going to market. But I find I am digressing from the steering-point of my letter.

I can readily understand that, when a ship is commanded by a severe or brutal captain, the crew should seek to quit their ship; but this inclination is nearly always exhibited, be the character of the captain-

good or bad. If the captain be good, and the ship herself be unexceptionable, then recourse is had to the "bad-provision" dodge, and instances have been known where one or more of the crew have tampered with the provisions they had complained of, in order to gain a verdict.

But that root of all evil, money, is the chief *causa belli*. When a seaman enters this port, and learns that, whilst he is working for £2 10s. a month, the wages given out of Bombay is £4, he braces up his mind for a row, refusal to do duty, and their consequent penalties,—the shadiest wall lounge of the House of Correction, where he can smoke the calumet of peace without its moral binding conditions. Now, as Jack is treading on my toes, in living on municipal funds which I contribute to find, I would beg to recommend an amended disposal of the funds which may be due to him from the ship which he leaves. At present, I believe he forfeits to the ship two days' pay for each day within forty-eight hours, and six day's pay for each extended day he is absent from his duty, in jail, or otherwise. If this forfeiture is classed under the head of fines, the owner has to pay it to the shipping master, before whom the crew is paid off on arrival in England. But let us suppose a seaman misdemeanant is committed to jail, and has £10 due to him; I would allot part of this money to the ship, to hire a £4-a-month man to fill the absentee's place on the voyage home, or to work in harbour, and the remainder should be applied for the man's keep in prison. Why should the inhabitants of Bombay be called on to pay for rows between the captain and crew of nearly every ship which now enters our port? I have a firm conviction that VATTEL would decide in favour of this view of the case. But is Jack *worked* in his self-elected House of Refuge where he happily attains the summit of his outward-voyage wishes? Report says that the number of seamen confined is too large to permit the enforcement of punishment. And if by the latter is meant that stupid squirrel-cage invention yclept the treadmill, I don't regret it. To a man who understands and can appreciate the divine uses of labour, such a brutal misapplication of human thews and muscles would be death. Or, if they *wilt* use it, in the name of common-sense put a belt on the wheel, to drive a gram-crusher, or for some other useful purpose. Jack here shows his superior wisdom in refusing to fiddle to a landsman's folly. But has the Indian Navy no sails to make, or spun-yarn to spin? It was only the other day that the Commissariat Department invited tenders for making 10,000 hammocks. Who could make them so well or so cheaply as these men? Anything would be better than corroding idleness. Better to make them attend school, and learn to read and write, as that would be a step towards a better life.

I have said that our merchant sailors have deteriorated both as orderly men and able seamen. I ascribe a large portion of this falling off to the greed, or call it folly, of shipowners, when the present Navigation Law was being passed. It was then thought that when the carrying trade should be thrown open to foreign bottoms, British shipowners would be ruined past redemption; and, as every little helps,

they begged to be allowed the suicidal privilege of release from keeping up the apprentice system. It is but just to observe that many shipowners were far-sighted enough not to avail themselves of this privilege, as they probably well knew that unless they trained *seafarers* they would fall off in the number of *seamen* to man their ships. This has now come to pass, and the captains of ships are loud in their complaints as to the want of seamanship in men who now unblushingly enter ships as able seamen, and when they get to sea the captain finds they are unable to take the helm, or a cast of the lead. I have of late years had many opportunities of verifying the deficiencies of seamen in rigging purchases, and other sailor craft, too minute to be dwelt on here. I have also seen a great deal of insubordination and skulking when important duties demanded the energy and hearty good-will of every man on board. This would have been freely given by the men who manned our merchant ships ten or fifteen years ago. But the abandonment of the apprentice system has left its deteriorating mark on the efficiency of the merchant seamen. The apprentice system has found a captain for nearly (if not wholly) every one of the splendid fleet of merchant ships now in our harbour; and of qualifications looked for in the captain of a merchant ship it has been truly said he is required to be well versed in navigation in all its branches, from plain trigonometry to great circle-sailing, and from finding the latitude by a meridian altitude to the longitude by a lunar observation. He must be able to conduct his ship to all parts of the world, and to keep her clear of lee shores, rocks, shoals, and sand-banks. Many captains are even kept on shore by owners to see a new ship built, from keel to top-rail. By this experience, thus gained, he becomes an adept in applying a remedy when a defect appears. He must be perfectly acquainted with various trades, such as sailmaker, carpenter, cooper, blacksmith, and sometimes cook. As a doctor, he has to prescribe medicines for his crew, and if, like his prototype on shore, he kills his patient, as a clergyman he has to read the funeral service over his remains. He must be thoroughly conversant with the maritime laws of all nations. Many of them are invested with the full duties of the merchant, in which capacity he has to exhibit the care and cunning of the lawyer in drawing charter-parties, bills of lading, &c. &c. He is supposed to be a kind and humane man, slow to anger, and of great command of temper; he must on no account ever allow himself to be so irritated as to lift his hand (be the provocation ever so great) against one of his crew. So sure as he does, *the poor ill-treated* (and *insolent*) sailor gets public sympathy, and a *reward* for his conduct: while the *brutal* captain gets either a heavy fine or imprisonment, or both, and public censure, for his conduct, without any consideration as to the heavy responsibility, anxiety and frequent difficulty of governing unruly crews. Notwithstanding all this, the captain must make his passage, and transact his business, in all climates and in all weather, and very little of the credit he deserves falls to his share. Yet it is to gentlemen possessing the foregoing qualifications that the Mercantile Marine Act applies these two Regulation Fines.

"Insolence or contemptuous language or behaviour towards the

Master or any Mate,—fine, one day's pay. Striking or assaulting *any** person on board or belonging to the ship,—two days' pay! It will be seen from the above that any brute on board may *strike* the captain (or any of the passengers) of his ship for the sum of *three shillings and fourpence*, if it so please him. But for the enormous offence of smuggling a bundle of cheroots or a silk handkerchief (which is about the limit of *Jack's* contraband peccadilloes) the legislature marks its horror of the deed by fining him *one month's pay!!!* Here we see that if the discontented spirits of a ship's crew are content to forfeit two days' pay (amounting to a "fiddle" the less when on the home spree), they can make an onslaught on the whole of their officers, merely taking the precaution of keeping just without the perils of the Mutiny Act.

Nothing has sapped the discipline of the merchant seaman so much as the rule which makes it incumbent on the captain, when forced to fine a seaman, to enter the fine and the cause of it in the log-book, and then call the offender aft and read the entry to him. This is done, and the seaman becomes from that minute the semi-mutinous instigator of all mischief and discontent.

It never appears to have entered the heads of our lawgivers that our merchant ship captains are quite destitute of any coercive means of punishing crime. The captains of Her Majesty's ships *have* that power, and the result is a happy and obedient crew. An ignorant man can scarce ever be trusted to guide his own impulses aright, when absent from strong controlling authority.

I may here mention, that I have served as boy and seaman both in men-of-war and in merchant ships, and I never met with but one cruel captain, and he was in the former service: and further, that I never heard from man or boy that I have sailed with that *they* had ever experienced much rougher fortune. Some bad men become captains of ships, no doubt, as we occasionally read of them; but, as a class of Her Majesty's subjects, I have seen as many kind masters afloat as on shore.

But let us return to ship apprentices. When a war forces our navy to look about for seamen, it is then we see the want of foresight in the Government, in not having taken a leading part in training boys for the sea. Let it not be thought that every boy we see on board ship is a graceless young scamp, just plucked from the streets, through which he was running to jail. Not so. There are thousands of well-bred, respectable boys (perhaps not over-fond of school) who are ready to dare all the adventures, dangers, and *solid brass hardships*—which "going to sea" entails on the bold sea-boy. Do our boys inherit this spirited love of the sea (deficient in nearly all other nations) from any of the old VIKING blood which streamed to our shores in days long past? In scanning the faces of boys on board ships, which duty has led me to visit, I am often forcibly struck with the preponderance in number of the bold, calm blue eye of the Anglo-Saxon breed, over those of the shore-loving Celt.

* Italics mine.

It was only a day or two ago I saw on board a ship, heaving at the capstan, three fine-made, blue-eyed youths, whose features showed that pleasing etching of virtuous lines which only a mother's love can attain to. On inquiry, I learnt from the captain that they were apprentices who were kept separate from the crew, and it only required to glance at the lads to show the wisdom of watchful separation as far as the duties of the ship will admit of. I was informed that the crew considered it a great grievance that these boys were not allowed to be their servants, to fetch and carry at command. It is from respectable youths like these that a captain may find support in the hour of hatching mischief, or deadly strife; there are thousands like them only too anxious to go to sea; and I must say I think it is the peculiar duty of the British legislature to promote and foster the inclination by every means in their power, in order that when the day of battle comes our ships may not lie in harbour, for months together, inert masses, wanting only seamen to enable them to engage the naval force of the world.

There should not be a naval port in Great Britain without a training-ship for boys. Of these many may be just entering on the downward path of crime: rescue, and make them serve five years at sea in lieu of the corrupting taint of the prison. Keep them separate until they are won back to a useful and virtuous life. We have plenty of old ships and young captains well suited to command those floating, cruising, schooling, hand-reef-and-steer reformatories. If the nation requires seamen in war time, they should train them when peace enables them to do so with funds furnished by commercial prosperity. It cost us eighty millions sterling to conquer Sebastopol. But if, by numerous training-schools for boys who are anxious to embrace a sea life, we had spent only one of these same millions, we might have crowded our ports and ships with *well-trained, orderly seamen*, in lieu of having to man our Baltic fleet with longshore riff-raff, the spawn of unsuccessful gold-diggers, tempered by a few good and orderly seamen from the Coast Guard, who were torn, in the nation's necessity, from domestic homes and ties which never contemplated such a step.

England can never train too many seamen, as the siege of Sebastopol, and events now in action on the Ganges, show that, in all our emergent wants, sailors make as good foot artillerists as do soldiers. Sailors are peculiarly fitted for working heavy guns, from their impromptu handiness with ropes, sheers, and resources for all conceivable difficulties.

I would humbly offer a few remarks to owners and captains of ships.

I have often thought, were I now captain of a ship I would endeavour to restrain seamen from using the obscene and blasphemous language which, amongst the majority of them, is seldom absent from their lips. I might meet with many rebuffs, but firm perseverance and well chosen appeals to their common-sense could not but work its way to a good result. I would also endeavour to make them wear cleaner skins and clothing, for nothing brutalises the mind more than a dirty skin, and, alas! dirtier language. Divine service on Sundays should always

be performed, weather permitting. I fear that few merchant ships do all they easily could do in providing their crews with a little fresh water for personal ablution and clothes-washing purposes. These silent measures of civilization would pecuniarily benefit owners in the long run, more than stuffing the ship with every available foot of cargo. In lieu of forcing men to endure the dark miseries of a leaky forecastle, I should like to see the American plan of deck-houses more followed as berthing for the men, where they would enjoy light and fresh air, and where the artful-dodger boys of the ship could not be employed, as in the Fagan-like forecastle dens, in breaking through bulkheads to get at cargo. The deck-houses should have a good roomy locker, with lock and key, for the use of each sailor, in which to keep his traps. Great ingenuity is displayed in making berths for emigrants when a Government commands it. Why should the owner not command the like conveniences for the crews of his ships—the winners of his fortune? The boys of a ship should never be allowed to live or mess amongst the men. If good arrangements are made aft, they can always live and mess there, under the eye of the captain, who should take every opportunity of elevating and guiding their moral sentiments, for which he will be well repaid in their revealment of plots and treasons against his authority when hatching by the crew. But there is a charge against some captains which is absolutely dishonorable to them. It is this:—When the crew are paid off in England, each seaman has a written discharge given him, in which are columns for recording his conduct during the past voyage; and it is said that most captains give a V. G. (very good) certificate to some of the arch disturbers and bullies of the ship, and thus the captain lends himself to the forger's practice of passing the *rebel base coin* on to some other brother captain for a future voyage, when again the rascal follows the same bold, bad course. No honorable man should give a bad man a good certificate, and further, if not against the law, I would write on the certificate the bad sailor's deeds *in extenso*. But I cannot see why discharged certificates should be given to sailors until they are *shipped*, or even at sea, as any man wishing to ship in a vessel would only have to give his name to the captain, who if he was satisfied with his outward appearance, would then apply to the Port Registry Office for a glance at the man's certificate, which would reveal his true worth as a seaman, and his character as a moral being. If the man wished to go to another port, he would desire his certificate to be sent there for reference, as before stated. When a captain had shipped his crew, he would obtain from the Registry Office their respective certificates, and when at sea, if thought necessary, communicate the good character they had each earned during their previous voyage. By adopting this plan, captains would escape, after discharge, the bully's vengeance for giving his true character; and the bad insubordinate sailor would remain, like a spurious sixpence, in the Registrar's *till*, as no merchant captain would ship him. But I would not part altogether with this stray waif of the ocean. Our navy wants seaman, and the Registrar might give our repudiated man a hint that the *Regenerator* frigate, *Captain Cure'em*, would enter his name on her books and no

questions asked. He would then learn to crack his biscuit, and live like a good seaman—or taste the * * *. This suggestion might be carried out to-morrow, and would work silently and with *certain* success. The regeneration of bad sailors should not be deemed derogatory to the navy, but be looked on as a compliment paid to their superior discipline, and as a sort of penance on the Government for not taking a more active part in training the boy, so as to insure making a good seaman of him. Owners! do you, now you have grown so rich on the labour of the degraded seaman, take an active part in establishing training-schools for your apprentices, or for boys out of which sailors are to be made? It was quite refreshing to my young mind, I can well recollect, when, thirty-eight years ago, I first went to sea, to hear men talk of how, when *they* were boys, the good kind owner of those days would have the ship apprentices “up to the house” for the evening’s school lesson. I’m afraid many owners are now only anxious to snare from the widow’s purse the last guinea to pay for the premium and outfit of her loved boy, who is to fill the post of midshipman, in some second-rate ship probably, to which the attention of “PARENTS AND GUARDIANS” is so forcibly and patronisingly called.

I have no hesitation in denouncing this as the great cheat of the day,—a cheat, too, mostly perpetrated on those least able to afford it.

Who has not seen one of these handsome pet-lambs in his prized gold-laced cap and bright anchor buttons? A glance at the proud eye, yet subdued grief-streaked features of his companion, reveals the widow of some half-pay officer, who has scraped together the last coin to fee the shipowner for a post that should have been freely given to the boy, who will soon have to strip off the gaudy plumes of the delusive midshipman to don the canvas trowsers and flannel shirt of the ship-boy. He may be taught navigation, but he will well earn, by a long and severe apprenticeship to the iron hardships of a sailor’s life that addition to the good education he brought with him. It may be fifteen or twenty years before he reaches the command of the ship, owned by the man who, through the mother’s ignorance of sea life, pocketed her guineas on the plea of the future command of a ship, which the well-educated boy might have sooner won for himself in another employ without any fee.

I find that American captains will not have anything to do with the modern English merchant seamen if they can help it. They hunt out the quiet Belgian, and orderly Dane or Norwegian. I saw eighteen of these men on board the American ship *Leona*, which left our harbour a few months back, and I must confess that they appeared to me the most hardworking and orderly seamen I have of late years seen in this port. When it is considered that the *Leona* is a fourteen hundred ton ship, and only carried eighteen men, those men could not have been bad sailors who brought so large a ship safe to port. I think they all went away in her. Her captain was a fine specimen of the old sailor school, independent yet respectful, careful yet bold (he brought his pilotless ship into harbour in the monsoon time drawing twenty-one feet of water, and this

was his first visit) : although Time had sprinkled sixty-four winters over his fine old Covenanter-looking head, yet he had a cabin full of fine robust children running about, whilst his son (a stalwart Norse-pattern fellow) was his chief mate.

Bombay, 5th October 1857.

TOM CRINGLE.

ROOF-TILING.

SIR,—Did the inhabitants of Bombay, and other parts of India where the same description of roof-tiling is used, only know of the enormous additional weight on the house-roofs over their heads after a long course of rain, they would be tempted to run out and face the “pelting pitiless storm” sooner than stand the chance of being crushed by the falling roofs.

I will not go over the old story of leaky roofs, notwithstanding the heavy and cumbrous mass of double tiles laid on to prevent it, but will give a few figures, which will at once show the weight of a given area of roof-tiling when dry, and when wet, so that my readers may judge whether we do not need a lighter material, which would ensure a perfect water-tight roof, and thereby economise the use of teak, now become 100 per cent. dearer than it was five years ago, in exchange for the present defective drip stone tiles, which require for one house as much good teak timber to uphold them as would build a moderate-sized vessel.

Let us take a roof, say 100 feet long, with a slope of 26 feet on each side, and with 40 feet span ; this will give 578 square yards (nearly). One square yard of double tiling will require 200 tiles, and 578 square yards would take 115,600. As each dry tile weighs on the average 20 ounces, this will give us a weight of 64 tons 10 cwt. 0 qrs. 20lbs., being within a shade the weight of two of the G. I. P. Railway’s heaviest locomotive engines and tenders complete on their wheels! But this is only during the dry weather. After continuous wet weather, each tile absorbs 5 ounces of water, which gives a further weight of 16 tons 2 cwt. 2 qrs. 5lbs., or the additional weight of half a locomotive and tender more, or a total of 80 tons 12 cwt. 2 qrs. 25 lbs.

Stop—I have still more to add. Most of us have faced our English November gusty gales, when “chimny-pots were falling ; ” when stout young men are nearly lifted off the ground ; when stout old gentlemen, after gallantly *pulling themselves round a corner*, have had to “bear up” in desperate chase after a runaway hat which gives twenty delusive hopes of capture before it submits to the wrathful grasp of the owner ; when ladies despair of making headway, turn tail, and scud under a crinoline mainsail and an inverted umbrella. Well, Smeaton determines the hurricane force of wind at 32 lbs. per square foot, or 288 lbs. per square yard ; but as the wind would only act on one side the roof, we will

take one-half, which gives an addition of another locomotive and tender (with coals and water this time), or 37 tons 11 cwt. 3 qrs. 11 lbs.

We have yet to add nearly two-thirds of another locomotive and tender for the weight of timber in the roof, which would contain about 722 cubic feet of teak, which at 60 lbs. per cubic foot (including iron-work and nails), will give 19 tons 15 cwt. 3 qrs. 26 lbs. As these items of roof weight have been dropped at intervals, like the leaden plummets of a trawl net, I will give them in a tabular form.

WEIGHT OF ROOFS.—House-roof measuring 100 by 52, or 578 square yards (nearly) :—

	Tons. cwt. qrs. lbs.
<i>Tiles.</i> —115,600, at 200 to the square yard when dry.	64 10 0 20
<i>Water.</i> —For absorption, at 5 ozs. for each tile on 115,600 tiles when wet	16 2 2 5
<i>Timber (Teak).</i> —700 cubic feet, at 60 lbs. per cubic foot.....	19 15 3 26
<i>Hurricane Force of Wind.</i> On half the roof, at 288 lbs. per square yards, on 144 square yards	37 3 0 16
	<hr/> <u>137 11 3 11</u>

Which is a little more than the weight of four locomotives and tenders complete on their wheels ; and as each of these measure in length 40 feet, they would more than once and a half outspan the length of the roof by ten, feet if we can fancy them straddling on the roof-ridge. Atlas is depicted standing with what a school Miss would describe as an India-rubber play-ball on his shoulders, but paint him bearing up a Bombay house roof, with four 33-ton locomotive engines and tenders riding on the roof, if you would do *pictorial* justice to his strength !

Some time ago I made the experiment of immersing tiles in boiling-hot coal-tar, which thoroughly penetrated the tile and made it watertight. By adopting this process, a single layer of tiles might be made to answer, thus ensuring a dry roof, and at the same time it would admit of a considerable saving, by lessening the scantling of the roof timbers. I have exposed these tar-indurated tiles as a part of a roof since January 1857 until now, and they appear as effective as when newly done. However, I have on various occasions received galvanised corrugated iron-roofing for railway goods' waggons, and have thought that house-roof coverings of the same material would answer very well. But Major Barr has suggested to me the form of our old English pantile, only longer, which I think will be admirably adapted for roofing, if the price should only prove moderate.

CROWS.—I would recommend the thickness of $\frac{1}{8}$ th of an inch, and Major Barr recommends this iron tile to be two feet long, so that our friends the crows may not be able to make their larders under them, as at present, which they do with any odd bone or mouse, when surfeited with the stolen bread and butter of some little baba who had been left to the predator's mercy whilst the ayah was lighting her

"biddy" at the cook-house. But be it known that Mr. Crow has a very deficient organ of locality, and returning from Colaba after a debauch on inebriating toddy, drank fresh from the tree, which has made him drunk and noisy, he has forgotten his impromptu cupboard, but not that he owned the bone. So, like a mad bird, he tears up perhaps twenty tiles before he discovers his *cache*, and, when discovered, he is too tipsy to defend his property, which falls a prey to some sober member of the community.

It is not generally known that on moonlight nights the crows often assemble on the house-tops in the Fort, and then wing their way to Colaba, for a regular toddy swill, returning drunk and disorderly, to annoy young bachelors who can't sleep from thinking of some fair face seen at the Band-stand in the evening. But I am wandering from my subject.

IRON TILES.—Most of my readers may think that our iron-tiled roof would be too hot to hold us, but this fear will only be realised if the roof is not ventilated by moveable louvres. It is really astounding that the houses we inhabit in this hot climate are not invariably ventilated from the roof. When this shall be done, the heat from iron tiles will cause a strong upper current of air to ascend through the ventilator, and of course an equal current of cool air will flow from the lower part of the house where we are seated, to supply its place.

Besides this, the roof may be all covered with a thick coat of heat-reflecting whitewash in a day with two men's labour and one rupee's worth of lime.

I intend to write home to enquire at what price one hundred square feet of $\frac{1}{6}$ th galvanised iron pantile roofing can be supplied, and also the weight of it, when I shall be most happy to communicate on this subject again; and as this "fact" may possibly catch some "iron eye" at home, we may possibly entice a little wholesome competition to serve so great a want as is aimed at—if the price suits.

Bombay, 13th October 1857.

TOM CRINGLE.

WRECKED GOODS.

SIR,—At the risk of being thought tedious in harping on one string, I would again draw attention to the defective manner in which the soldering of tin packing-cases is executed. It is roughly estimated that from bad packing, leaky bottoms, and decks of ships, insufficient soldering of tin cases, and a few other *preventable* causes, there arrive in this port alone damaged goods to the value of £500,000* annually. This sum falls of course on insurance offices. But I would humbly protest against our being contented with this comfortable reflection. If insurance offices grew silver ingots in garden beds, side by side with silver onions, or had an unlimited free order on Potosi or the Bendigo Diggings, then indeed our feelings of profit and loss might

* Which alone would nearly construct the Pier the Author of these papers has recommended in a pamphlet just published.

be less acute. But that stern monitress, "Reality," bids us remember that we pay large fees on the understanding that if our merchandize does not arrive in "good condition" we are to be reimbursed for the loss. But who pays the bill when a caitiff tinman or caulkier neglect their respective duties? Why, my friends in Cosmopolis, L, and O, and S, and E, to be sure; and perhaps at the very time these, my brethren, are "shelling out" to cover *my* losses, I am doing the same insane though kindly act for them at the antipodean side of the globe—the defaulters in both cases being the same. I can understand and appreciate the wisdom of insuring against the oak-rending lightning, the hurricane blast, the wandering iceberg, the fatal rock-strewn lee shore, the unknown shoal, or the accidentally fired ship,—the most of these are visitations of Nature, guided by the Omnipotent. Yet we see a ship sailing into our harbour with the complacent dignity of a Datchett-on-Thames swan, whilst under her sieve-like decks lie a thousand pounds' worth of sodden goods, a tribute to Carelessness, whose bill, drawn on Industry, for that thousand pounds, is a libel on human good sense, care, and preventive precaution. Are ships' boys and the caulkier so busily employed that a daily inspection for leaks cannot be made; and, if found dripping over costly merchandize, not to have the benefit of an intervening tarpaulin?

If the parching suns of summer open the roof-joints of our railway carriages, so that the close-following monsoon rains let drip but a globule of water on the sacred nose of a passenger,—a nose too, perhaps, like Bardolph's, which may possibly be, Dives-like, languishing for the cooling drop,—what a noise, and "*I'll-write-to-The-Times-about-it*" hubbub is made.

TIN CASES; BAD SOLDERING.—But stand forth, thou wretched tinman,—thou monstrous *sham*, as truth-speaking Carlyle would call thee,—thou whilom sieve-maker to the Danaides; let me confound thee with a great "fact" which has robbed Cosmopolis of £50,000. Know, then, that a noble ship was lately wrecked when approaching our monsoon fog-laden shores. Lloyd's Agents fondly believed that, after the gale had abated, most of the packages, being tin-lined, their contents would remain uninjured. Alas! they knew not thee—thou Charge-for-work-not done, or they would have gone home and taken things easy. But bright Hope still whispered that the most part of the cargo might be saved, packed as it was in tin-lined cases; and that if they could win them to the shore after the gale, although with damaged exteriors, they would, if not receivable by consignees, at least be saleable when the protective water-excluding (?) tin shields should be opened. What a delusive hope! The credulous agents found, on inspection of the various cases, that they had only "saved their bacon"! Yes;—I conclude that, from frequent by-gone losses, manufacturers of tin-preserved bacon stand, cow-hide whip in hand, exacting honest air and water-tight work from our tinman. Amongst this cargo I noticed a few hams that had evidently been tin-soldered up by some "prentice hand" at this peculiar business; the shape was not the well-known one of the curing trade, and alas! they looked fearfully *plump*, indicative of corrupt gases within. Wamba would have fled in dismay at the opening!

AUCTION SCENE.—Other tin-cased goods were all a pitiful wreck. Costly pictures, books, woollen cloth, ormolu clocks, brave military horse furniture, with gold-braided jacket and pard-skin adorned helmet, which probably some handsome young horse artillery officer had been impatiently awaiting the arrival of, so that he might induce some fair maid to give the casting vote in his favour. Alas! the once costly jacket was now a rotten rag, with here and there a tag of lace, over which a brood of Borah vultures were making depreciatory remarks, in order to secure the coveted prize to themselves. As a bye-play to this scene, the Hector-befitting helmet was placed on the grave head of a tall pot-bellied Borah (the Jew of India in dealings—Mussulman in creed), who looked like Ajax after a few years' effeminating residence at some Homeric Capua. In a word, nearly the whole cargo was one olla podrida of mess, rotteness, and spoliation, the handiwork of the neglectful Tinman.

Bombay, 19th October 1857.

TOM CRINGLE.

* * * The following remarks, on careless packing, are extracted from the Report of Mr. John Allan Broun on the Observatories, established by the Rajah of Travancore, at Trevandrum, and on Agustier Mallay Peak; they so completely make “assurance doubly sure,” in confirming my own observations, that I cannot resist the temptation of giving them a place in these pages :—

“ Another box reached me at the same time, which I assumed to be the instrument from Munich: when I opened the outer packing box, I found the straw sparkling with glass powder, which had been sifted through the joints of the inner box. It was some time before I could determine the species of instrument that had originally occupied the inner case, but ultimately discovered it to be a dip circle on Gauss’s construction. I had requested a friend to obtain a dip circle on this construction, from some instrument maker (after repeated failures on trying myself); this instrument, then, came without any letter or information that it had been despatched, and as I have not been able to find the maker’s name, I feel at liberty to say that so much faith, or so great carelessness, in packing, it would be difficult to rival. The vertical circle, weighing two pounds, was screwed to a sheet of plate glass by a hole cut in its middle, the plate glass was fixed to a metallic frame, so that the first shock, when the circle was vertical, must have wrenched the plate glass to pieces; the circle was then at liberty to roll at freedom; it smashed the glass door of the case, and broke to pieces the double cut-glass cylindrical pillar on which the needles should rest. This must have all occurred in the first railway carriage in England; after which the circle had no further work than to grind the glass as fine as possible,—a labour it had performed with considerable completeness. The circle itself was not, of course, benefited by the operation: the divisions were scratched and cut in every direction, the microscopes were bruised, and one of them wrenched off the circle arm. Should this report meet the eye of any instrument maker, it may be of some use to him, and to scientific men, especially in India. Every instrument at all fragile should be packed with the greatest care; and in the instance above given, the circle should have been removed from the plate glass and packed apart; every pin or screw that could tumble out should be tied, and the packing box should be enclosed in a larger one, with six spiral springs, one at every side, fixed between the sides of the two boxes. In this way the large barometer from Mr. P. Adie reached me safely, as well as the two actinometers alluded to above; the breakage of one of them was due to a moveable piece not tied up.”

“ I am glad to say that the instruments from Munich have reached me in a perfect state, and that the packing was above all praise.”

SHEAR HULKS.

SIR.—I am given to understand that at Calcutta there are three places alongside of which ships can lie to discharge heavy machinery, viz. one belonging to the Government, another belonging to the P. & O. Company, and a third for the use of the Railway Company. Unfortunately for Bombay, the rocky nature of the shore, except where the Fort Docks are situated, is such as not to allow of ships being hauled alongside of shears or cranes, even if they were provided. Parts of Mazagon may be called an exception ; but it must always form a part of our consideration, that after landing very heavy machinery, it is to be removed from the landing-place. Machinery landed at Mazagon, when removed, would have to face all the difficulties of the ascent of the steep hill in the vicinity of the shore, together, with a sharp and winding descent on the western face.

Discharging Machinery.—English experience has made it a rule that cranes or shears for lifting heavy objects are the most suitably situated when connected with a railway, on a siding of which machinery, &c. can be at once lowered on to the truck which is to take it away. This instant removal of heavy objects from under the drop of the shears or cranes enables them to take another lift directly they are freed from the last hoisted, whereas the crane at the Bombay Customs Bunder is blocked up for days by some piece of machinery which it has lifted, owing to the difficulties of removal.

The Government Factory crane is a most excellent machine, capable of lifting about twenty tons, and the approach to it for ships is over a good bottom, and the locality well sheltered during the monsoon,—a condition of great importance where cranes are employed to lift heavy bodies from a vessel in motion ; for if this motion be only moderately severe, the snatching strain on the crane is nearly sure to make something give way, probably strain a link of the lifting chain, which may not be noticed at the time, but which may cause a large amount of after damage, should it part when the object lifted has attained a considerable altitude. With shears angled over a ship's hold to about thirty degrees, the danger is greatly lessened, owing to the springy elasticity derived from the catenary curve of the chain guys on the land side.

I have said that the approach to the Government factory crane is over a good bottom, but unfortunately this is only so for ships during the spring-tides, when not exceeding from 500 to 600 tons, and whose draught of water must not exceed ten feet six inches, or at most eleven feet. But the approach may be made available for ships of 1200 tons, if the silt deposit were removed down to the dock-sill entrance level close by. I have heard that this may be brought about by an expenditure of eight thousand rupees. To show that this would be a profitable outlay, it only needs to mention that small ships are often glad to get into the Mud Dock under the crane now, when the fees, say for a five hundred ton ship, are as follows, viz. :—

Government Mud Dock Fees.

Pilotage from and to ship's moorings, Rs. 70 <i>each way</i>	Rs. 140
Mud Dock fee for one day, or one spring	150
Use of crane per day	10

The fee for being in the Mud Dock (if dock it can be called) is rather high, but it sinks into insignificance when ships are obliged to seek admittance into the Upper Duncan Dock, under the Dockyard shears, said to be capable of lifting fifty tons; but I think if we deduct twenty tons from the above we shall be nearer their capacity. The docking, pilotage, and crane-fees for a large ship, of say 1200 tons, together with the etceteras contingent on lifting out three or four pieces of machinery, must not be totalled under Rs. 2,000. Of course no fires are ever allowed to be made on board ships in dock, consequently the captain and crew have to be victualled from hotels in the neighbourhood.

But as the shears in the Government Dockyard were erected for the purpose of lifting engine-boilers and machinery of the East India Company's Steam Navy, and as this dock is often either wanted or in actual occupation by one of the Government steamers, it is seldom that it is available for private purposes; when it *is* wanted and cannot be had, the old proverb becomes an undisputed truth, that "needs must when the devil drives." The writer of this "fact" has this day passed through the anxious ordeal of taking a piece of machinery, weighing 16½ tons, out from a ship lying at her harbour moorings. Three other similar pieces are to follow, which he hopes will meet with equal good fortune.* Nevertheless, the responsibility is rather trying, when two seven-inch Manilla tackle-falls, which hold this weight suspended, are sweated into a *lean* circumference of five inches, and you are inwardly praying that the rage for adulteration may not have reached the homicidal stage of mixing bad Russian hemp with good tough Manilla fibre-made rope.

As my object is to inform people in England of the facilities Bombay at present possesses for taking out heavy machinery, in order that neither shippers nor captains of ships, who may be strangers to the port of Bombay, may be disappointed on arrival, I cannot do better than give the actual expenses paid for docking a ship to take out four pieces of machinery, each weighing sixteen tons.

Government Graving Dock Fees.—It should be borne in mind that the docking and pilot charges are rated according to the ship's tonnage. In the instance I am about to give, the ship was 986 tons, and the charges as follows:—

	Rs.	a.	p.
Transporting from moorings to dock buoy	67	0	0
Do. back to moorings after undocking ..	67	0	0
Hauling into Dock	134	0	0
Admission into the Lower Duncan Dock	600	0	0

* Fortune has since seen us safely through this job.

	Rs.	a.	p.
Hire of the Lower Duncan Dock for two days....	80	0	0
Hire of the Upper Duncan Dock for twelve days..	480	0	0
Hire of Shears for five days	250	0	0
Hire of Factory Crane for five days (in order to put the machinery into boats, for the purpose of going under shears connected with the railway)	50	0	0
Messing Captain, Officers, and Crew whilst in Dock, for which paid two-thirds	161	0	0
Labour charges, &c. &c.	200	0	0
Total ...	<u>Rs. 2,039</u>	<u>0</u>	<u>0</u>

It may possibly be of service to shipowners and captains to know that vessels requiring to be docked can be accommodated in the P. and O. Co.'s Dock at Mazagon when not wanted for their own vessels.

There is dock accommodation for two ships. Over one of the docks is a pair of large ordinary-rigged shears. But, as I before observed, the Mazagon Hill, besides the narrow, tortuous lanes outside the Dock-yard, would make it a hopeless case to attempt removing very heavy machinery from this Dockyard to other parts of the Island.

P. & O. Company's Dock Fees.—The charges for docking are not rated on the size of the ship, and are as follows, viz.:—

Charges for Dock Hire.

	Rs.	a.	p.
Opening the Gates	*400	0	0
Per diem	30	0	0
Builder's charge per diem	8	0	0
Hauling into and out of Dock	144	0	0
Hire for each Shore per each spring	0	3	0
Do. Stage Plank do. do.	0	3	0
Do. Rafter do. do.	0	1	0
Do. Gangway Ladder do. do.	1	0	0
Do. Godown per diem	0	8	0

Timber cut for shores will be charged for.

All charges not enumerated here are charged for after the Government Dockyard rates.

The P. and O. Company execute work of every description for ships that use their dock.

All materials for the repair of ships which are purchased by captains in the town have to pay a fee of 10 per cent. when admitted into this Dockyard.

My object in writing the foregoing is to show that there is a capital opening in our harbour for a shear hulk, alongside of which ships might haul and discharge machinery without the risk, always more or less attendant on rigging temporary gear for that purpose.

I will now venture to throw out a hint or two which may possibly

* 1 Rupee = 2 Shilling ; 16 Annas = 1 Rupee ; 12 Pies = 1 Anna.

induce some shipowner to supply our want. There are many large ships whose best days are past, and whose charms are at zero in the eye of that very particular man, Mr. Lloyd. Or there may be some built from the washing-tub model of the "Goede Vrow," that famous ship, which, according to the veritable history of New York, written by Washington Irving, was the first to navigate the River Hudson.

A ship that would take six months from Liverpool to Bombay, in fact any large lumpy hulk, with plenty of room in her, will answer. Such a ship need not come out empty; she might bring out a light cargo and all the necessary fixings for her shears, besides moorings. I would recommend pitch pine-built shears, which will last quite as long, and be much lighter and cheaper than teak. She would have, besides the large lifting shears, a smaller pair on the reverse side, for hanging any heavy object as a counterbalance when lifting very heavy weights.

I Should think twenty-five tons quite sufficient for the capacity of her shears, with everything fitted to ensure that no repairs to them would be needed here.

Uses.—But besides her earnings as a shear hulk, her capacious hold might be let either to receive the crews of ships which go into dock, or she might be made a coal hulk, employed by Government probably, as a ship arriving from England with coals for the Government could haul alongside and discharge the whole consignment, instead of first rolling the coals into dust down a shoot into a coal boat, which is then taken to the coal store (tide permitting), when the coals are again reduced in size and quality by the hoe-shovel and basket process, for the purpose of being taken into the store, and perhaps in a week's time the same destructive process is again *twice* gone through in putting them into boats and delivering them to the steamers. A large hulk full of coals would be very handy where despatch was of importance, as the steamer could haul alongside and be coaled in eight or ten hours: at the same time, our shear hulk may be busily employed lifting machinery, &c. &c. on the other side. Then there are ships to unmast and re-mast nearly every week. Others spring a leak, and have to return to port, and in lieu of being supplied with about two fifteen-ton cargo boats per day to receive the cargo, and thus take six weeks to unload a ship, with the pumps nearly continuously going (as I know from a recent "fact"), our leaky ship could haul alongside the hulk, and in a week tranship the whole cargo—go into dock, get her repairs executed, and receive it again in less time than it took the vessel, which, as I said above, took six weeks to unload.

Or a ship on returning to port leaky might tranship her cargo into the hulk, which, being thus well down in the water, would then be able to "heave down" the leaky ship, and thus save the expense and time of going into dock. There are many quiet safe spots in the upper parts of our harbour where this operation might be performed even in the monsoon.

When we get our shear hulk, I would have her moored up the harbour, opposite Mazagon, where she would be well sheltered from the

monsoon with a good safe bottom, excellent holding ground, out of the way of the harbour bustle, and in a convenient position for ships to run alongside at any time or tide.

Bombay, 2nd November 1857.

TOM CRINGLE.

OVERLOADING SHIPS WITH DEAD WEIGHT, &c.

SIR,—It is at this time the wonder of the maritime portion of the Bombay folks that ships should be loaded in England for this port with such enormous cargoes of dead weight, which often injure ships so loaded, and certainly endanger the lives of those who navigate them.

At first sight this may appear to concern only shipowners, and those who sail in ships so laden. But if I mistake not, the question will soon react on the pockets of shippers of goods; for if a ship earns £2,000 for bringing out a cargo which half ruins her, and forces her to undergo repairs here, the cost of which swallows up the outward profits of the voyage, shipowners will soon come to the conclusion that they must have higher freights, to cover costly repairs forced on their ships when they reach distant colonies, where *copper* nails may be fairly rated as *silver* ones.

The way to remedy this is for shipping agents to distribute their heavy and light consignments in a more equable manner, and not for one ship to carry all dead weight and another nearly all light.

I will give one or two instances of the suicidal policy of overloading ships with dead weight.

The ship *Edmund Kaye*, of 1115 tons, brought to Bombay 1500 tons of iron cargo and coals. One night she fell in with a very heavy gale off the Cape of Good Hope, which caused the ship to labour so much that captain and crew never expected to see morning. We can picture to overselves brave hearts stoutly battling with a gale in a fairly loaded ship; but, hark! what noise is that under hatches? Alas! every one soon learns with dismay, by listening to the pandemonium sounds below, that the cargo has got loose, and, when viewed by the dim glimmering lanthorn light, it is seen that some heavy pieces of machinery are madly butting at each other, like infuriated bulls of Bashan, with every lee lurch and weather roll of the groaning hull. No one dared descend, to trust fragile legs and arms amongst this dark hell of rioting ponderous matter. At last it was decided to throw in amongst the warring mass junks of wood, and large bundles of spun-yarn (which luckily they had on board as part of cargo), but even these expedients at first looked as hopeless as George Stephenson feeding Chat Moss with earth. At length a truce of quiet was attained below, as if to reserve the energies of captain and crew for still greater dangers above. The huge waves formed troughs, into which the distressed ship plunged her heavy bows with the rapidity and force of an eight-hundred-ton steam-hammer, and rose again like a spent horse

after a heavy leaping fall. We can all form a pretty correct estimate of the downward momentum a dead weight cargo would give a ship after being poised for a moment on the ridge of a heavy sea under the centre of her bottom. At times she sank down and down, as if altogether tired of the contest, and caring not to lift her head again. Heavy seas swept the deck of loose articles, and burst in the poop bulk-head. This straining soon brought on a serious leak, which the captain and crew had to fight against at the pumps, and this work lasted till she arrived in Bombay, with six feet water in her hold. All the ship's copper sheathing was wrinkled at an angle of 45 degrees from a point in the centre; the wrinkles sloping to the right forward, and to the left aft as you face the ship's side. Since discharging cargo, several of her iron knees have been found broken in two, and a great deal of the copper and wood sheathing has been washed off. There can be little doubt but that for the energy of the captain, officers, and crew, this ship might have been added to the mournful list of those that have gone to sea "and never been heard of again."

Rewards for Saving Ships.—Do Lloyds reward actions like this, that save them thousands of pounds? Or is a victim crew and ship acceptable now and again, as a hint to the prudent to run no risks, even when two-thirds of sea risks arise from preventable causes? It is thus that this nice balance of profit and loss is preserved like an institution of the State, but only preserved by *Carelessness* picking the pocket of *Prudence*. This may well be true when we are informed that Lloyd's Shipping Insurance registers one accident *every two and a half hours of time?* These accidents range from total or partial ship-wreck, to collisions, getting on shore, loss of spars, &c. &c.

Courageous Example.—The ship *Edward* experienced a heavy gale also, which caused her to spring a leak so seriously that her Captain (John Boag), with a courage which does honour to his profession, had ropes fastened around his body, and, with a plug of oakum in his belt, threw himself overboard during the gale, and succeeded in forcing sufficient oakum into the hole, which caused the leak, to reduce the work at the pumps enough to enable him to bring his ship safely to port. As it was, he had to throw overboard from 60 to 100 tons of cargo to save the ship, and arrived at Bombay so deep in the water as to make it a marvel to old ship-masters how she got round the Cape of Good Hope in such a deeply-laden state.

The *Silistria* also suffered so much from a dead weight cargo that she just managed to reach the Mauritius with *seven feet water in her hold*. At this place she will have to discharge a heavy machinery cargo of great difficulty, and undergo repairs, the expensiveness of which at that port is rather notorious.

The *Uncas*, another deeply-laden ship has been dismasted, and had to go in to Gibraltar. This ship is very strongly built, and has not, I believe, suffered much in her hull.

My object in recording these "facts" is two-fold,—first, to show that it is for the true interests of shippers not to overload with dead weight, or an increased charge for freight will surely follow injury to

ships,—second, I would modestly throw out a hint for strengthening ships. Let us imagine a ship balanced on the centre of her keel, when the strain on her topsides and deck must be something enormous. But as neither deck nor topsides are made strong enough in all ships to withstand this strain, they without doubt camber away from it as much as they can, and a wrenching strain is thus given to the beam knees. In no other way can we account for the stout iron knees being broken which connected the beams with the sides of the *Edmund Kay*. To strengthen the upper surface of a ship (especially old ones), I would dock them, with a four-inch rise head and stern when on the blocks, and then brace them with 14-inch square timber string-ties from stem to stern. Of these there should be two, one on each side, far enough apart to form large roomy hatchways,—the fore and aft combings of which these string-ties would form. The string-ties would pass just on the outside of the windlass bitts forward, and be bolted to the bow timbers on each side, as well as to the stern timbers aft. They would also be bolted down and notched on to every beam fore and aft the ship as well as to the windlass bitts. Thus applied, these string-ties would act on the hull like the chord string of a bow, and thus prevent the extremities from sinking. Every beam would also be kept fairly to its work, by being bolted to the string-ties about half-way between the centre and sides. These ties might be covered with the dining-table seats in ships' saloons. They would confer additional facilities for strengthening the bow and stern-posts, as well as the capstan bed-framing, &c. The hurricane-house on deck might be built within the two ties, or, where no house exists, the boats might be blocked up from them ; they would also serve for the insertion of good stout ring-bolts, instead of injuring the deck with them, as at present.

CAPSTANS.—I will take this opportunity of saying that nearly every ship that is fitted out now-a-days is sadly crippled for the want of stronger capstans than they carry. Those who have to discharge heavy machinery complain of their weakness of spindle and want of power. The pilots scarce dare trust their warps to them when hauling into dock in a fresh monsoon gale. All poop or forecastle capstan spindles may easily be carried to the deck below through the steward's pantry, or some other place out of the way. The spindle should be of good six-inch square iron above deck, turned at the bearings, furnished with good pauls, and the barrel clothed with lignum vitae, and not with cast-iron, to cut the foolish owner's ropes to pieces.

JURY RUDDER, &c.—Would it be a bad idea for shipowners and Lloyds to combine in offering a premium, open to all the world, for the best models of jury rudders, masts, and wreck rafts ? When approved of, reduce or augment the scale, and let joiners make thousands of these models from the prize ones, to suit the tonnage of ships, so that every ship, after being supplied with a model rudder to the scale of her own sternpost and rudder, could also be furnished with a model of the *very best* design for a jury rudder, &c. These models should have painted on their several parts the feet and inches it would be necessary to cut up spars, &c., to form for that particular

ship a jury rudder, also how it should be fastened, and all other essential particulars.

LIFE-BUOYS.—Metal life-buoys should always have soldered within their tubes blown bladders, well swathed with any old cloth, to keep the hot metal from destroying them when exposed to the sun; if the metal tubes should then get punctured by accident, the bladder within would make them as buoyant as if sound. I saved two lives by this precaution.

Bombay, 7th November 1857.

TOM CRINGLE.

HELMETS, &c.

SIR,—What vile-fitting helmets our accoutrement-makers turn out, hanging on to the forehead as they do till the pain is somewhat like the *maiden* boot of the old Scottish torture days, instead of making the helmet to sit easily down on the back part of the head, with an ample peak behind to protect the neck from sword, sun, and rain, and then, by lengthening the front of the helmet well down, and giving a large spreading peak to redeem the head-dress from any eye-sore one might otherwise feel from the backward sit of the helmet. Thus equipped, our dragoons might gallop about all day in easy comfort without the necessity of raising the sword arm to hold on the helmet. The Bombay Horse Artillery helmets are very heavy and very hot, from not being ventilated, and yet nothing is more easy to do. Besides the above defects, they have no peak behind to protect that most sensitive part of our frame, the neck, from our fierce Indian sun and rain, or from sword-cuts. For making helmets, “there is nothing like (pump) leather,” but it is difficult to say when the time shall arrive that a good *war head-piece* will find its place on the heads of our soldiers in a time of peace. Would it not answer to have a store of good comfortable leather helmets, fit for hard blows, to replace the gaudy toys of peace?

HELMET-SCALE FASTENINGS.—Amongst all the changes and improvements of military head-dresses for the British army, I think the cheek scale fastenings have been overlooked. The method of securing the scales to the helmet or chaco has been, and is now I believe, to have a small pin with nut and screw end, or a piece of wire, soldered to the rosette, rove through the hole in the top scale, and then fastened on the inside of the head-dress. This *looks* all secure, and only looks so; for as the top part of the rosette stands out a little from the skull part of the helmet, it is quite open to a downward cut of a sword, which would, with the slightest blow, sever the pin or wire, when “down comes helmet, scales and all,” and our trooper would have to ride after fresh laurels bare-headed. To remedy this, I would suggest a recess piece being brazed to the head-dress, between which piece and the skull-cap part of the head-dress the fastening scale could be pushed up, and then the nut and screw fastening would still remain through the scale, although the rosette might be chopped away.

SWORDS.—How very inconsistent to see a stout Herculean young officer armed with the same pattern “Regulation Sword” as the weak boy at his side? Why not have three sizes to suit the very strong, medium, and weakly officer?

I have noticed a defect in nearly all sword *hilts*—that is, they are not long and roomy enough for large-handed men to change with rapidity from the sweeping cut to the quick-following after-point. As plenty of room in the hilt is no detriment to the efficient use of a sword to a small-handed man, I think we might have the additional length of hilt here asked for, but by no means remove the pan-headed rivet on the pommel, as it not only securely fastens blade to hilt, but in the heel of the hand it gives, at pleasure, great power (by friction) of suddenly arresting the sweep of the sword, or of giving a firmly poised point.

If a swordsman should long for an electric thrill of unmitigated disgust, let him handle a ship’s cutlass! A most vile tool, possessing the weight and unelasticity of a crow-bar with the short reach of a Cheapside cookshop carving-knife, together with a small crippling hilt, to be wielded, too, by the largest-handed men in the world! I do not think that a ship’s cutlass should be as long as an Andrea Ferrara, but as it now stands it is a disgrace to those who make or buy them.

I only know the Scottish claymore from those I have seen in highland regiments. The blade is all that one may desire, but the hilt, according to my judgment, appears to be a handed-down sham from the man who invented it, and who must have been in mortal fear of a “rap over the knuckles.” The hilt is so *basketed in* that I cannot conceive how a parry can be made without dislocating the wrist, and I confess I should not like to use one against an opponent armed with an open-hilted sword. It appears to have been designed for cutting at unresisting foes. I am aware that this same basket-hilted claymore is reported to have played a distinguished part at the battle of Preston Pans, but as in the instance alluded to, the claymore was used against infantry, that event is nothing in its favour as a weapon of *defence*. If I could elicit the opinions of cavalry swordsmen I feel pretty confident of a verdict in favour of the view I have taken. I say cavalry swordsmen because, as the sword is a weapon so much in their hands, they are keenly sensitive when they get hold of a sword, the hilt of which does not admit of that broad sweeping parry so essentially necessary to turn aside lance thrusts, when urged home by the impetuous charge of a mounted opponent.

Except when pursuing a routed foe, the sword is more effective in a good hand when used defensively. An impetuous swordsman leaves himself very open by loose cutting, and the modern system of guarding the person by having the point of the sword well thrown forward towards your opponent; that by dropping the point and thrusting home (an operation performed with lightning-like rapidity) you may be almost certain of running your man through the body. The elder Angelo, Sword Master General to the British Army, took great pains to discover in what position the swordsman retained most strength in the arms and shoulders when defending himself from the heaviest

assaults, well laid on with heavy swords and stalwart muscular arms. At these jousts I have seen given the strongest cuts without in the least disturbing the "guard." This practical swordsman quite exploded the expanded breast position of the soldier. Experience will teach any one who likes to try, that the muscles of the arms are at their weakest point when the chest is protruded. Watch a man carrying a heavy weight with both hands, and see how by natural instinct he raises the shoulders, and, by rounding them, braces together all the motor muscles of the shoulders and arms, which gives the strength needed. In this position the chest is nearly hidden in a bay formed by the salient points of the shoulders. This attitude might shock the chest-expanding notions of a martinet, but it is the true position for a horseman when defending himself, and it especially provides the muscles of the arms with that keen and ready sensitiveness to obey the will with the rapidity of a lightning-flash.

Angelo frequently used to say that "two inches from the point of a sword was more effective than two cuts;" and when it is considered that this gentleman taught the use of the sword so well that our Guardsmen were enabled to cut through the middle of a suspended leg of mutton at one stroke, we may trust to his teaching in the matters I have ventured to allude to, which in these fighting times may be excused as coming from an old *sabreur*.

Bombay, 12th November 1857.

TOM CRINGLE.

BREWING.

"Willie brew'd a peck o' maut."

SIR.—Who has not sacrificed to the honour of John Barleycorn in this thirsty clime? I have heard of some ardent devotees who at one sitting have walked off with 12 bottles under their belt, and found no damages to repair in the morning. Do this with brandy (deducting 1½ bottles) and you corrode the coats of the stomach; with wine, and you are half poisoned and wholly *dazed*; with gin, and you injure the kidneys; with "creaming champagne," and in the morning your head feels like a basalt boulder. Gin discovered Boothia, with a most infinitesimal quantity of Felix in it; but John Barleycorn made our railways; builds bridges, ships, and steam-engines, like a good, useful, honest fellow that he is. He strengthens the stomach and gives vigour to the muscles. The Parsees merit the compliment of being the most Europeanised of all the natives in Bombay,—it is to John Barleycorn they owe the honour. Beer follows an Englishman as steadfastly as the daily sun shines on him, *but* it only follows him in barrels and bottles, and is thereby rendered twice as dear as it should be. Only for the paternal care of honest John Company, his soldiers would never be able to taste their national beverage, and would thus be driven to indulge in arrack, which fires the brain and wastes the strength, in lieu of adding to it, as does malt liquor. Since malt liquor has been supplied by

the East India Company to the canteens of their army, a very large decrease of drunkenness has followed. Owing to the nearly prohibitory price of beer, our poorer English brethren cannot taste it. Why should it not be plentiful enough to enable the ships of the Indian Navy to take a few barrels of it up the Persian Gulf, to invigorate the stomachs of their crews during the burning heat of a Bushire summer?

I need not here enlarge on the *virtues* of "ale"—they have been said and sung often enough. Everybody has heard or read of the "Old John Randal" of Great Wolford,

Who, counting from his tale,
Liv'd threescore years and ten,
Such virtue was in ale.
Ale was his meat, ale was his drink,
Ale did his heart revive ;
And if he could have drunk his ale,
He still had been alive."

As far as price is concerned, and the difficulty of cheapening beer, of course every one is prepared with the answer that John Barleycorn is a mere Indian passenger, always coming out but never going home, except on the backs of lusty Commissary Generals, and stout twelve-bottle Majors. Why not present him with the freedom of India? He is enthroned in our hearts (I'm in doubt whether I should not have written stomachs): why not build him a place at Poona, and enthrone him there? To see the "blacks" flying from a brewery chimney would be as invigorating as to see their co-colourists flying from the vengeance of a British Infantry square after a "pot all round." But a truce to fun,—let me get to "facts."

The East India Company has, I am informed, on one or two occasions made offers of assistance to European residents of Poona to establish a brewery there. One individual did make the attempt. The Honorable Court sent him out a ton and a half of hops free of the home and Indian duties and freight, besides pecuniary assistance; but from what I can gather our brewer knew more of the pleasing art of drinking than he did of making it, whilst he knew nothing of "malting." In proof of this, I am informed that he laid his malt on the perforated plates of an *impromptu* kiln, and allowed the fire direct access to the drying plate, accompanied by a vile stinking smoke from cowdung, prickly-pear stalks, and other rubbish, whereas the heat from a steam-pipe contact, if ranging from 90° to 163° of Fahrenheit, would have done even for porter, the malt for which requires the higher temperature. But for the mild ales mostly drunk in India the malting process will not require a kiln at all probably, as the malting heat for ale brewing only requires to be as high as from 90° to 100° of Fahrenheit. This heat, together with a desiccating wind which would rejoice the heart of a maltster, is always to be had out of doors at Poona, except in the monsoon, at which season no brewing would be undertaken. The brewer is best able to say whether it is absolutely necessary malt should be kiln-dried; if not, then can I promise him a wind of Mexican dryness, and *certain sunshiny* days, that will never fail to give the temperature he may require for his malting process.

Site of Building.—I do not think that brewing, in all its processes, could be successfully carried out in India unless in vaulted chambers underground. But, as if placed for the very purpose we require, there is a low hill composed of soft decomposed trap, and moorum, or indurated clay, with a scarped face, nearly abutting on the north side of Sir Jamsetjee Jejeebhoy's river-bund at Poona. In this hill underground chambers may be made, and arched with bricks made from the river-clay in the vicinity. The innermost ends of the several chambers should be made to communicate with a ventilating shaft up through the summit of the hill, which is about the height that such a shaft would require to be carried. To people in England these underground vaults may be considered as involving great expense, but from the cheapness and abundance of labour, together with materials equally cheap and plentiful, I anticipate this would not prove so, as the railway works now in progress at Poona will have ceased to monopolise labour and to enhance the price of building materials. In fact, these works being finished, will have left in their trail a large available body of workmen, who, in the neighbourhood of large cities, do not care to leave their wives and families for work that involves a gipsy-lodging alongside a railway.

Water.—If our future brewer is satisfied with the site I have chosen for him (and I think he would be), he will have directly in front of, and close to him, soft river-water, which, if it should not possess that full *body* which report says is so essential to the London brewers, let him not despair, as we have plenty of materials and a fitting temperature to give it any *body* required. Perhaps our pale mild ale may not require it,—my wish is father to the thought.

Temperature and Ventilation.—In these underground vaults proposed, I am confident that an *equable* temperature may be secured for three or four months of the year, either by the natural temperature of the vaults, or aided by artificial means well known to all residents in warm climates. The ventilating shaft will carry off all close or heated air caused by the several brewing processes, and which air will be replaced from outside, admitted through wet tatties or not, as required. Even our rock-tunnels at Perseek, short as they are, possess an agreeable coolness in the hottest days of our hottest months. Besides, the air of the Deccan, except in the rainy season, is remarkable for its extreme dryness, which is always essential to evaporation; and by evaporation heat is withdrawn, be it from a goglet of water or a tattied chamber: when this process fails, it will be found in the want of a free passage and exit for the heated air. It is for this I recommend the ventilating shaft.

Temperature of Poona.—The following memo. of the temperature of Poona for 1856 has been kindly supplied to me by Dr. Manisty, and I am assured it may be relied on. There is little doubt but that by vaulted chambers, and other artificial means, if required, the mean temperature may be reduced 10 degrees, which assumed reduction I have shown in the table given. The usual brewing temperature for England is quoted by Dr. Ure at 60 degrees, but then we must recol-

lect that the climate of England, especially in most brewing localities, is very humid, whereas the climate of Poona is particularly dry; which fact would prove highly suited to the various brewing processes, and would, I firmly believe, admit of those processes being carried on with the thermometer at 64° during the six months from September to the following February, inclusive.

Memorandum of the Thermometer at Poona for 1856.

Months.	Max.	Med.	Min.	Mean.	Reduced 10° by artificial means.	Brewing temp. as given by Dr. Ure.
1856						
January	86°0	71°0	56°0	71°0	61°0	60°0
February	89°0	71°0	53°0	71°0	61°0	60·0
March	97°0	80°0	64°0	80·3	70·3	60·0
April	102°0	85°0	68°0	85°0	75°0	60·0
May	97·3	82·5	67·7	82·5	72·5	60·0
June.....	89·6	78·0	66·4	78·0	68·0	60·0
July	83·7	74·7	65·8	74·7	64·0	60·0
August	81·7	73·5	65·4	73·5	63·5	60·0
September ...	84·6	73·3	62·1	73·3	63·3	60·0
October	89·6	74·4	60·1	74·7	64·7	60·0
November ..	88·1	71·4	54·8	71·4	61·4	60·0
December....	83·8	66·8	49·9	66·8	56·8	60·0
						Mean 65.1

Steeping.—The temperature for this process can be considerably modified by artificial means, as already observed, means which, if necessary, could be employed in this and other processes, should germination advance too quickly. Steeping cisterns might be raised on low arches, and lined with our fine chunam, which will take a polish like marble. Tatties may be hung round the arches, so as to allow the air to pass through cooled.

Couching Floors may be managed much in the same way as the steeping cisterns. I hope due allowance will be made for my want of knowledge in the art of brewing (art!—we will enthrone it as a *science* here if successful); all I can say on some of the processes requiring a certain equable temperature is, that we can sufficiently modify undue heat when heat would be hurtful, and the *sweating and flooring* may be successfully carried out without a chance of failure. I would not recommend the use of malting shovels in this country, as women-labourers would be exceedingly expert in manipulating the malt in all its various stages, and in a manner and with a carefulness that will leave no cause to regret the absence of the shovel, together with the additional advantage of not bruising the grain before it is dried.

Sun-kiln.—For drying the malt (or sun-roasting it), I would recommend a tressel stage about two feet high, on which to lay perforated iron plates: on these plates the malt would be laid, and it would then

have the benefit of a dry current of air flowing up the perforated plates through the malt, with the sun above to give the proper kiln heat it would otherwise require. As I said before, it is for the maltster to say whether the heat of the sun will suffice in itself to supersede the use of the kiln. But from what I can gather on this process, it appears important to arrest and put a stop quickly to germination. This, I think, can be readily done in our very dry atmosphere and hot sun, with light-handed women turning it about incessantly, after which it may be safely kiln-dried to the extent required.

I take it for granted that if you can create a temperature suitable for the delicate operation of malting, the same temperature will also serve the various operations of mashing, boiling, cooling, casking, and —oh! delicious thought!—drinking! This last operation puts one in mind of eating, and what more delicious than sucking-pig, which pleasant Charles Lamb says was invented by the Chinese? Give us our brewery, and we command abundant and wholesome food for the porcine adults, from whom the ambrosial sucking-pig!—to command which in this land at present, without a brewery, is defilement horrible to think of.

As the whole operation of the brewing depends so much on an equable temperature, I here again revert to it to say that, by having underground vaults for conducting such of the brewing processes as will require a moderate temperature, I think we may safely reckon on attaining to 10 degrees of Fahrenheit below the out-door heat. Brewing is carried on in Australia, where the summer temperature is higher than that at Poona. What the Australian cool season heat is I have no means of stating. I am also assured by a gentlemen well conversant with the fact, that excellent beer was made in Ceylon some time back, and also in the Northern Provinces; but from what can be gathered, these brewers so assiduously tested their own ales, that the profits proved losses, by flying to their heads in lieu of their bankers' strong boxes. We want none of these, but a man and his men who are good practical brewers, with perhaps a dash of such scientific knowledge as may enable them to conquer little difficulties, which to an unlettered man might appear insuperable.

Casks and Bottles.—It has often formed a theme of inquiry as to where all the old pints go to. Might it not also be asked where all the porter and ale casks and bottles go to, which are imported every year from England, and especially those that go inland from Bombay? Here, then, is a supply of casks for our brewer, at the price of about Rs. 3 to Rs. 4 each, together with quart (?) bottles at twelve* for the rupee, which will, I trust, relieve him from all anxiety as to what he is to store his beer in after he has made it.

Consumers.—Once prove that good light ale is to be made in Poona, and the consumption will be enormous. As it must be borne in mind that our European Army is to be greatly augmented, these brave thirsty warriors will all prove good customers, beside the present civil

* Now (in 1863), the price is less than 2 annas (3d.) per dozen owing to the accumulation of years.

consumers, whose name is legion. I hope I shall be able to whet the honest acquisitiveness of our brewer that is to be, by telling him that I am within bounds when I state that the East India Company annually send up the River Indus, for their soldiers in Sind and the North-Western Provinces, 30,000 hogsheads of porter!!—Shade of Barclay! will this trumpet-note not lead you to the—*Vat*?

Hops will have to be pressed into cakes in England, and sent out in tin-lined cases, to prevent any loss of aroma, &c. Freights about 25 to 30 shillings per ton. It is by no means certain that hops may not be grown in some of our Deccan hill-stations, like Singhur.

Barley.—There are immense crops of good barley grown up the Persian Gulf at Bussora, and from inquiries made from our Commissary lately with the Persian Expedition, I learn that 120 lbs. of barley were purchased for one rupee (two shillings); the freight from Bussora would be about Rs. 7 per ton. There are large crops of barley grown also in Bhawulpore, and shipped down the Indus *via* Kurrachee. The prices quoted for this appear high when compared with the Bussora barley, viz. Rs. 10 to Rs. 12 per candy of 625 lbs.; freight from Kurrachee should not exceed Rs. 5 per ton. But I am informed that better barley can be grown in Khandaish, at 150 miles from Poona, when a demand for it shall arise. And large crops of barley are now grown near Poona, as I am informed by a gentleman who feeds his horses on barley, because it is cheap, good, and plentiful.

Experimental Trial of Brewing.—For this I would recommend that a small but efficient brewing apparatus should be brought from England. Any bulky articles belonging to it may be taken to pieces, packed up, and put together at Poona. We are decently off for native coopers. I would also recommend that the malt for the trial brewing be also brought from England in tin-lined casks, after being well dried before packing. Hops the same.

When his “trial brewing” of beer is ripening, our brewer may then employ himself in trying experiments in “malting” our country-grown barley.

Means of Carriage.—We have (or shall have in six months from this) railway carriage from Bombay to Poona (except a break of five miles up the Ghauts), with the line extending itself 164 miles onwards to join the Madras Railway. This is the south-eastern branch of the G. I. P. Railway. There are nearly 500 miles of railway being constructed of the north-eastern branch, which leads past Nassick, through Khandaish, and on towards Jubbulpore, to join the Calcutta Railway. The bifurcation of the two branches is at Callian, 35 miles from Bombay. From Bombay we shall also be in communication with the North of India by means of the Bombay Baroda and Central India Railway, which will pass along the coast through Surat, Broach, Baroda, and Ahmedabad, and will no doubt be made to communicate with the Sind Railway. Thus Poona will be in railway communication over the great arterial lines of India. I am particular in giving these facts, so as to show that if a good brewery on a large scale shall become practicable

the carriage for distributing ales in covered vans is equal to anything of the sort in England, and a lead now taken in establishing a first-rate brewery may result in supplying both the sister presidencies.

Aid in the First Trial.—This is an important consideration. What we want is a good brewer, whose business at home is cramped by rivals with large capitals and larger *names*; —one who just manages to brew good ales, but who cannot make a fortune, and who of course will need assistance to make this venture. This assistance, I feel assured, will be given to him by the East India Company, who have on more than one occasion taken an active interest in this question of brewing, for the sake of their European soldiers, who have always enjoyed liberal treatment from them. At present they import large consignments of malt liquor for their troops, and at very great loss to themselves, as large quantities are often landed from ships in bad condition.

Therefore I sincerely think, Mr. Brewer, that if you apply to them with honest earnest faith, and a determination to do justice to their liberality whilst helping you to fame and fortune, and if you can guarantee that you are prepared to embark some venture of your own, if only to show your good faith and earnestness in the trial, then I think aid may be given so far as to save you from loss.—Loss! Go in to win! and do not think of loss, of which there is nothing to fear.

The first brewing trial may be made in a thick-walled old native palace, which is situated on the bank of the river at Poona.

I feel confident, also, that you will meet with the most warm and cordial support on your arrival in Bombay, both from the Government and all and every official connected with it, as well as from all public departments which can in any way assist you.

Should you prove successful in your trial efforts (and I am assured you will by gentlemen who *assisted*—that is watched—at the brewing effort of 1838), I have no doubt but the Government will make no scruple of giving you the site for your brewery which I have indicated, should you deem it suitable. When the attempt was made to brew in 1838, the *profit* was estimated at Rs. 18 (36s.) per barrel. Our best beer (Allsopp's and Bass's) is now selling at Rs. 6 per dozen, bottled in London, and the price per barrel ranges from Rs. 75 to Rs. 80.

If the writer of this can afford you any further information, he will be most happy to do so on your addressing

Bombay, 23rd November 1857.

TOM CRINGLE.

THE VOYAGE OF THE P. AND O. CO.'S STEAM SHIP "MADRAS" FROM BOMBAY TO ADEN.

DEAR SIR,—I promised to give you a short account of our monsoon trip to Aden, and if it be not what you expected, you may ascribe the failure to the boisterous passage we have had. We left as you are aware at 6 P.M. on the 19th July, and arrived here at 2 P.M. on the 30th. I append a track route, and table showing latitude and longi-

tude, course steered, distance run, and number of miles distant from Aden each day at noon. We had pretty moderate weather the first day out of Bombay, after which the monsoon gale increased daily, until it reached its culminating point on Tuesday the 27th, when it reached 10 in intensity, (I may here explain to landsmen that 0 indicates a calm, 2 a zephyr, whilst 12 shows a hurricane in all its wrath). You will see by the track chart, that without going so far south, as the Indian Navy vessels usually do, we went far enough to ensure us a fair wind nearly up to Aden (generally a point free), when we hauled round to west. When we changed to our westerly course, Captain Aldham set all our fore and aft sails, and kept them up till the wind died away off Cape Guardafui. To this bold and seamanlike measure we owed the good behaviour of the ship during our passage across the heavy chopping sea and furious gales to be found in the thick of the monsoon track.

The *Madras* is an iron-screw steamer of 1,200 tons burden, 280 H. P., and consumes only 23 tons of coals daily. I never saw a steamer's furnaces fed so well as this ship's, scarcely a particle of carbon comes from her funnel. Mr. Grant, the Chief Engineer, must save his salary many times over daily in the saving of coals alone. I had never sailed in a screw-fitted ship before, and had a very poor opinion of the power of the screw as compared with paddles, but this splendid ship never made less than six knots in the worst weather, at a time when I am sure a paddle-steamer would have been walloping in the trough of the sea, shaking her frame to pieces from vibratory action, and scarce holding her own. The *Madras* is the driest sea boat I ever saw, as during the whole passage she never shipped more than the spray tops of seas, although the whole of us (passengers) have been watching a huge wall of sea piled up ten feet above the gunwale, which appeared determined to come on board, but the lively graceful craft would surmount the hill of water, and often hurl a defiant counter buffeting wave from her strong breast as if she laughed Daddy Neptune's efforts to scorn. The ship derived this power from being a screw-boat, and from having such a press of canvas on her; the latter preventing her from making those long weather rolls which strain a ship to pieces, and cause us poor landsmen to dance the *Clutching Polka*, to the great amusement of all the old salts on board, but plenty of canvas made her lively and nimble in getting out of wave mischief, which the gallant vessel did sometimes as if by magic. One incident of the passage is worth notice. On Sunday morning, the 25th, a lascar was washed overboard from the bowsprit, whilst employed setting up the jibstay. The usual solemn outcry of "man over-board!" without being loud and noisy, startles every ear, and soon penetrates the inmost recesses of the ship, announcing that a kindred human life is in utmost peril. The watchful Engineer stops the giant power which propels the beacon of hope from the despairing gaze of the doomed man. The vigilant Chief Officer luffs the ship in the wind to deaden her way, and enable him to get down the sails quickly. Captain Aldham, with that ready promptness for which sailors are so remarkable, first rushes to the binnacle to note the compass bearing where the accident occurred, then to the post of

command on the bridge ; the masts are clustered with the lost man's shipmates, eagerly looking for some trace of their missing comrade amid the huge crest-churned waves which seemed to mock man's saving efforts, and bade hope despair ; a boat was manned ready for lowering, although it was scarce possible for a boat to live.

But our Captain was too cool to risk additional life, or give up the hope of saving the human soul then imperilled. He gave the order to turn ahead, then brought the ship sharp round to port, and when on backward track, let her run gently down till he guessed that he had hit the spot where the man was lost, then slowly brought her round to port again, thus judiciously confining the search to a given elongated circle. Soon after the ship was placed on her original course, the cry came from the mast head that the life-buoy was right ahead, but alas ! without the man it was thrown to save. Then came the welcome, thrilling cry, that the man was close by,—in a moment every eye was nervously strained in the direction indicated by the men aloft, and presently we all saw the poor fellow floating on a mountain wave. "Turn ahead full power !" was the exciting command, which movement brought the man on our port side ; when Captain Aldham, with great judgment, put the helm a starboard, and by bringing the ship round to port, made of her a breakwater as it were, so as to enable us to pick the man up, without lowering a boat. An African Seedeey-boy lascar was heard crying aloft for the supposed loss of his chum, and when the ship was placed as described, he boldly jumped overboard, and a small cask belonging to one of the boats being thrown to him, he very cleverly propelled it to his exhausted shipmate, who clutched it, and the strong African in like manner propelled cask and comrade to the ship, where the rescued and rescuer were gladly welcomed on board ; the former from almost certain death, the latter for his gallant conduct. We are to make a purse for these men when we are about to leave.

On Tuesday the 27th we sprung our mizen mast which forced us to take the mizen off the ship, after which the mast was fished and made all secure.

I cannot close this letter without saying how very clean all the cabins are kept, which reflects great credit on her Purser, Mr. Fennell ; the ship has been running five years in the East, yet I did not find the least trace of vermin, such as mosquitoes, fleas, cockroaches, or bugs, in her cabins.

Our table was amply and luxuriously found ; and during the heavy gales the cook must have had a busy time of it, for blow high, blow low, everything was prepared to perfection, and although many an unsteady pair of legs brought doleful faces to table, yet after a little coyness the owners found holes in them through which to pass the good things spread before them. The table attendance is of the first order, the servants actually appear to divine whether your thoughts point to roast pig, or to cutlets "*à la Maintenon*." Then again the act of *disarming* is rather amusing. One servant begins at one end of the table, and whips off every knife, fork, and spoon, as he proceeds ; this part being accomplished, all the good things are swept of the table by

means of a sort of revolving polka amongst the servants, each of whom receives a dish, gives a pirouette on the left leg and passes it to another, till the tail gets less and less, when out goes the last dish borne by no less a person than the chief butler, who then retires behind a sort of chiffonier, which being surmounted by a pictureless gilt frame, the butler appears emframed, in it as a half picture,—but just watch his eyes. Nothing is said, but let him observe a passenger make a pause in feeding, when a dagger-like look is darted at a servant, who is instantly looking over your shoulder to see what's the matter, when he observes probably that you are taking your double Gloster without Beer, off he rushes and gets the very desirable fluid you were pausing for !

I never saw officers whose kind and brotherly bearing towards each other approached the demeanour of those belonging to this ship. From the highest to the lowest they appear fully devoted to the interests of their employers, and eagerly seek to oblige each other, yet in no ship ever have I seen duty so fully carried out, yet this is done in a *bonhomie* manner which never galls. During the whole voyage, and every night, six pairs of eyes are keeping a watchful gaze ahead and around to guard against any chance of collision. As this letter has been written under difficulties, which even Mark Tapley might have pronounced "jolly," I trust you will look over its many defects.

Aden, 30th July 1858.

TOM CRINGLE.

Table showing the track taken by the P. and O. Company's Steam Ship *Madras* from Bombay to Aden, 1640 miles, during the S. W. Monsoon :—

Date.	Lat.	Long.	Course.	Distance Run to Miles.	Miles to Aden.
1858					
July 20	Noon....	18°20' N.	70°41' E.	S. 77° W.	128 1520
" 21	"	17 86 N.	68 31 E.	S. 59 W.	146 1368
" 22	"	13 29 N.	68 10 E.	S. 6 W.	218 1350
" 23	"	12 16 N.	65 44 E.	S. 63 W.	159 1216
" 24	"	11 54 N.	63 00 E.	S. 83 W.	165 1060
" 25	"	12 49 N.	60 04 E.	N. 72 W.	180 875
" 26	"	13 21 N.	57 25 E.	N. 79 W.	163 720
" 27	"	13 48 N.	54 21 E.	N. 81 W.	180 538
" 28	"	13 22 N.	50 58 E.	S. 85 W.	201 396
" 29	"	13 01 N.	17 42 E.	S. 81 W.	200 153
" 30	"	12 43 N.	15 17 E.	S. 85 W.	145 10

THE P. AND O. CO.'S STEAMERS.

SIR,—It is a fact, that any trading company, whose dealings are always naked to the public eye, is criticised in the minutest particular by those arch-grumblers of the world, the Saxon race. Does a company break down from a succession of unavoidable disasters, they are abused as fools or corrupt mismanagers, and deserve failure. On visiting the P. and O. Co.'s Steamer *Jeddo*, on her arrival on the 28th instant I was much pleased with the *completeness* of everything on board. All

aloft was the best of its kind, ready to do battle with a hurricane, or repose with giant ease in a calm. Visit any part of the ship, and you stumble on ingenious appliances to mitigate the discomforts of a sea voyage. The accommodations for passengers have had the greatest attention. Many people, who are unacquainted with the requirements of a staunch ship to bring her living freight out from the peril of a great storm, grumble and fume if the cabins are not as well ventilated as the transept of the Crystal Palace. But to the seaman, versed in these matters, the strongly-built hull and well-found gear are of paramount importance, and no one can refuse this crowning palm of marine excellence to this deservedly thriving Company. How many of their boats but have been caught in the terrible typhoons of the China sea, yet have never come to grief, during all the long years their vessels have navigated them; and during the twenty-seven years' existence of this Company they may justly plume themselves on never having lost a passenger's life. Yet these life-saving, sea-boat qualities are in a moment forgotten, should some young passenger lad, just released from school, discover that the pickles are a trifle soft, or the wine not worth 20 shillings a bottle, or the chickens not as nice and tender as those strutting on the grassy meads of Dorking! Forgetting that these vessels have to lay in the live-stock at distant ports, when they are "cabined, cribbed, confined" in coops and pens till, in a deteriorated condition, their fated hour arrives. When these grumblers about trifles arrive in India, and have to keep house themselves, do they never stumble on bad comestables? Do their servants never make mistakes? Has their dhoby never stayed away a day too long, like the Aden caitiff who had the ship-linen of the P. and O. Co.'s steamers, and for which unpardonable crime the P. and O. Co. were to be deprived of their contract and never employed again! I have made the Overland passage many times in this Company's boats and I honestly declare, that I never had occasion to utter the ghost of a grumble, except at a little tight-lacedness at Malta, in not giving one a cup of tea if you should happen to be a little late from the shore. But even this was won after the stewards had demonstrated to us that if the engine did not want a little rest they did, as it was not to be supposed they could "keep the things on the table always."

People talk about the amount charged for first-class passages. It does appear high as compared with the charges for living at an hotel, but I must honestly confess, that after a good dinner on board, surrounded by attentive servants, hobnobbing wine with a dozen gentlemanly officers, all expensive surroundings, and when enjoying my after-dinner cheroot with eye glancing up at the funnel, through which daily pour the departed soul of fifty tons of coals every twenty-four hours, costing from three to five pounds sterling per ton, then taking a look at the engines I see the chief engineer enjoying the pay of a Royal Navy Post Captain,—and, again, reflecting on the floating hotel, I might estimate the cost at £150,000,—and besides this, I know that her nautical life will only extend to the fitful span of some ten years—if she have luck—then there is the ship's company to pay, stores to find,

provision, furniture, insurance, and a host of other charges that we wot not of,—and then looking around you and seeing some two dozen passengers who are perhaps enlarging on what *they pay*, which, in a couple of days, the steamer will have puffed the mighty sum out in the shape of smoke! I always wonder “how the devil they do it.” People talk about this Company sharing 10 per cent., as if it were some monstrous sin—they ought to be ashamed of, forgetting the while that other companies, merchants, cotton-spinners, railway contractors, and a host of others, are sometimes clearing 100 per cent. I attribute the enduring attitude of this eminently useful and efficient Company to a clear start and a full purse. If they had been satisfied to plod along, “*carrying their ass to please the public*” in lieu of first getting on the weatherside of inefficient poverty, the loss of one or two or three vessels in succession would have brought them to a dead-lock like many other steam-boat companies before them.

Let me return to the *Jeddo* again. I was much struck with the fine, manly-looking crew they have on board. They are the cleanest and most cheerful-looking seamen I ever saw, and offer a marked lesson to the merchant shipowner as to the influence good usage, good feeding, and good, healthy sleeping bunks have on sailors. Many of the sailor boys are gentlemen’s sons, and their handsome, frank faces don’t belie their breeding.

I have been twice round the Cape, and have no hesitation in saying, that the P. and O. Company’s second class table and berthing is equal (for men) to that of any ship which rounds that famed headland.

If the P. and O. Company ceased to exist to-morrow, I think we should all heartily pray for it to come back to us, with all its faults. The fact is, they have attained perfection so closely, that spots on their sun of bright excellence are easily seen and carped at by grumblers.

March 30th, 1860.

TOM CRINGLE.

VENTILATION OF SHIPS.

SIR.—The evil of defective ventilation on board ship has been complained of for years, and yet no remedial steps have been taken in the right direction, as I conceive.

Windsails, by conducting fresh air below, at the best only dilute the noxious gases generated in every ship’s hold. I have seen the case of a silver watch turned nearly black in one night when hung up in the lower cabin tier of a steam ship. Let any one visit our beautifully-fitted passenger-steamers’ saloons, and they will observe that white painted panelling is carefully excluded, for it is well known that the foul sulphuretted hydrogen and other gases, generated in a ship’s hold, would soon put it in mourning, as if for the health it had destroyed.

Cabin berth ceilings look white and clean (on board P. & O. Co.’s boats), but they are indebted for this to harbour scrubbings and painting

which passengers know not of. This is all very commendable in the officers of the ship, but still the noxious gases exist.

I have visited sailing vessels after a long voyage, and found that the white paintwork in the cabins had been turned of a leaden-black colour by the same destructive agents. A nice eye might even detect where, by a chink in the lining board, the gas had streamed on to a given point, and painted the part quite black. In order to confirm this statement, I may mention that gold or silver lace is irremediably spoiled when stowed in cases and placed in a ship's hold, if the cases are not tin-lined. I have known new white hemp rope, when stowed for the voyage in the hold, to arrive in Bombay quite rotten, so rotten that a strong man could break in two a 4-inch rope, which, if sound, would have borne a breaking strain of three tons. Let me recommend *en passant* that shippers of cordage should always make arrangements for it to be stowed in a dry airy part of the tween-decks during the voyage; otherwise it will assuredly suffer from the rotting action of these deleterious gases. It is the best ships which are the most impure, for they are so watertight as not to leak enough to keep them clean. This fact brings to mind that if the gipsy has to live under a hedge he has the compensating benefit of a pure atmosphere to breathe, which endows him with good health; and long-continued good health in races gives strong and handsome limbs, brilliant eyes, and white teeth. So of the sailor,—if he has to pump at a leaky ship, he sees by the colour of the ejected water whether the ship is clean and wholesome; thus, what he expends in muscular action he gains in healthy lungs to support that action. I am aware that many captains cause water to be thrown into the hold, but it is done mostly as a part of deck washing, when the impurities which accompany the water render the remedy rather doubtful.

I have served in both naval and merchant services, and I certainly think that the holds of merchant ships are—the cleanest, I was going to say—the least poisonous of the two. I do not ascribe this to culpable indifference, but merely to existing usage, which has overlooked the sanitary advantages of a clean hold, and some system of its being self-ventilated irrespective of the care man may or may not give to it. On this subject I will presently offer a few suggestions, but before I do so I wish to bring the testimony of others to bear on this most important subject.

The world is now and again startled by some terrible tale of the suffocation of men, women, and children, when from stress of weather they have been confined below deck with all the horrible accompaniments of the "middle passage" of the slave ship. Most of my readers may recollect this picture having been realised in an Irish steamer, when the loss of life was fearful,—the poor sufferers actually seized each other in the grip of death, when the full horror of suffocation was working its deadly influence. It is to the suffocating hold of the Mauritius-bound coolie ships, that we may ascribe cholera and the "coolie fever" in them. The Mecca pilgrim ships are in the same unventilated state, aggravated in both cases by the filth and other abominations which find their way to the fetid liquid in the holds of the ships. I here speak from

actual experience, as I shipped for China in a new country ship in February 1826, when the vessel had just returned from Judda full of pilgrims, for which purpose she had been lent by her pious owner, and the state of that ship, from unheard-of filth, would pass belief.

When doctors inspect a plague-stricken ship they should invariably *set the pumps to work for a few strokes*, which will solve a problem of this nature better than all the inductive reasoning in the world. Hear what a writer on ventilation says:—

“ In addition to all contaminating agents, carbonic acid, nitrogen, animal effluvia, carburetted and sulphuretted hydrogen, &c., to which the air of an unventilated apartment is liable, there is yet another cause of injury to health in the disturbed electrical condition of vitiated air. This is a subject on which science has thrown no light. All that we can do is to record the fact, that pure air such as is fit for respiration, is *positively electric*, while the air which has become impure, and consequently unfit for respiration, is *negatively electric*. ”

It is now pretty generally believed that cholera is prevalent only during electrical disturbances of the atmosphere. The same writer adds:—“ In our naval and merchant services much disease and mortality are the direct consequences of defective ventilation. The lower decks and close cabins of ships are often crowded with people engaged in cooking, eating, drinking, and sleeping. Their condition is bad enough in fair weather, but in a gale of wind, with the scuttles closed and hatches fastened down, and no means provided for the admission of fresh air below but what can find its way by an opening of a few feet square; when the vitiated effluvia from the healthy, the sick, and perhaps the dying, come steaming up the same aperture down which the fresh air is struggling to find its scanty way to the miserable inmates, how can we wonder at the mortality of seamen, especially in tropical climates? In troop or transport ships the constitutions of the men are frequently enfeebled, instead of being strengthened, by the voyage. Moreover, the evils arising from want of ventilation are aggravated by the horrors of sea-sickness; the sense of smell becomes morbidly sensitive; the bilge water, or that stagnant corrupt water which lodges in the bottom of tight vessels, emits the offensive smell of sulphuretted hydrogen and other gases; and these, combined with the closeness of cabins in sailing vessels, few can endure with impunity; all this is even made worse in steam-boats by the odour of the hot rancid tallow used for greasing the engines.” I believe I have now said enough to show, what is in fact well known, that the foul gases generated in ships’ holds, should be drawn off, and thus render them sweet and healthy. I have now only to state the agency by which this may be done both in steamers and in sailing vessels.

To ventilate steam-ships I would lay down one main pipe, say eight inches in diameter, from stem to stern along the kelson; the pipes should be common socket, but with the socket considerably elongated into an acute funnel shape about eighteen inches long. The spigot of the adjoining pipe should be perforated with $\frac{1}{8}$ holes for the space of one foot from its end, except about three inches to fit into the socket

of the other pipe, the funnel-shaped *shield* of this socket would then overlap the perforated holes, and keep them from getting filled with dirt. A ventilating wrought iron galvanized pipe or tube should be led fore and aft, one on each side, so as to communicate with each cabin. In fact, these ventilating ducts might be made of an oblong shape, and so fastened along the sides of the ship as to perform the double duty of strengthening the ship as "stringers" as well as aiding the ventilation. These pipes would draw off the heated air clinging to the under part of the deck, and the two pipes, after receiving an exit branch from those in the well of the ship, should then terminate in an inverted Δ , the upper or stalk part of which should then lead into the engine blow-off pipe. If the steamer's engines were condensing there would not be any exhausted steam to furnish a blast in the blow-off pipe. This could easily be remedied by fitting a pipe for the purpose of throwing continuous jets of steam into the Δ stalk, which would act like the blast of a locomotive, and create such an up-draft of foul gases and heated air from every part of the ship, that the efficiency of the plan would, I am confident, be universally admitted.

The pipes might be made of quarter-inch galvanised iron plate, bent to the form required, and rivetted. The shields at the socket joints for the lower hold could also be rivetted on. One thing I may mention as regards making the tubes or pipes—that close or costly riveting would not be needed, as the pipes would have to be perforated in many places, therefore a leaky joint would be of little consequence, except at the stalk of the Δ above deck, where it would be necessary to create a partial vacuum by means of the steam jet. When in harbour the blow-off pipe would still continue to ventilate the ship, although not so forcibly as when steam was available. Nevertheless, a small fire grate might be placed in the fork of the Δ , in which, when in harbour, a fire could be made to create a draught.

I feel confident that the Bombay Dockyard steam factory would be able to fit one of our Indian Navy steam frigates in a very short period of time.

To ventilate sailing ships, the same system of pipes as for a steamer, with the stalk of the Δ leading up through the floor of the cooking caboose, and up through the centre of the closed fire grate and the plate above, thence through the roof of the caboose or galley. By this method the metal pipe (cast iron in this case) would be *red hot* from being situated in the heart of a closed grate fire, thus creating the necessary degree of vacuum to ensure a steady ventilation.

The system of ventilation I have here recommended has one merit, which at first sight a landsman would be apt to overlook, viz., the mouths of the exit pipes would not admit water to the hold if a heavy sea was shipped; most of the existing means of steam-boat ventilation by little puny valves, &c. are open to this objection. I trust we shall have no more unscientific efforts made at ventilation by pouring down cold air;—draw off the stinking, poisonous gases, and fresh air will always fly to occupy its place.

Would it pay?—This would be the first thrifty question put by the owner. To which I answer—Yes, yes—fifty per cent. on the first outlay. This is how it would pay; In your advertisement for passengers by the good ship —, after the “experienced surgeon” would follow—“and fitted with the bilge floor and cabin tube ventilators, so essential to the health and comfort of passengers during the voyage.” That is one way in which it would pay. It would also enable your ship to bring out creosoted sleepers as well as passengers, as the ventilators would draw off all the offensive creosote-gas. This gas also pollutes the biscuit and tea of your men, which leads to complaints. It once, in hot weather, set fire to a ship, because the captain forgot to air his cargo by taking off the hatches when opportunity offered.

An increased number of ventilating pipes on this plan would enable you to carry both troops and horses, when you might be loath to cut scuttles in the sides of your ship, well knowing that they would weaken her. This ventilating system would enable you to carry home our *cheap* wheat to England’s *dear* market, where you would land it dry and cool, and not like the Glastonbury thorn at Christmas—just throwing out a crop of instant vegetation. We should also receive consignments of perishable articles in their pristine state of purity and strength, not as in many cases at present, half rotten from the effects of sulphurated hydrogen gas.

Besides these advantages, when you had fitted out your ship with these pipes leading to the bottom of her hold, as well as to the top of your cargo, the gentleman who owns the “Fire Annihilating” secret would walk on board, with a bottle of the anti-caloric gas under his arm, and a man following with a pair of portable bellows, they would instruct your officers how, in the event of a fire in the hold, you should fix a flexible hose on to the top of the A stalk, and pump the “Fire Annihilating” gas down to the very bottom of the mischief, and extinguish it before you could puff to the candle.

All well-ventilated ships do not suffer from wet and dry rot, and ships that are not ventilated *do*. If shipowners will only reflect on the evils created, both to health and property, from the filthy bilge water and vitiated air, &c., which are noticed in the early part of this paper, they may probably be led to think it is their *duty* to protect the lives of the passengers and crew (who of necessity have to trust themselves to their care), by ventilating ships on some principle that shall be effective and self-acting, and thus rid us of the “ship fever,” “ship scurvy,” “ship cholera,” and “ship’s-hold suffocation,” which sometimes decimate their inmates.

I may here mention what may prove a useful hint, viz., that the crews of the Indian Navy are allowed to sleep where and how they like, the sacred precincts of the quarter deck excepted. The officers are very considerate and wise in this respect, as in ships I have served in, the awnings were always spread at night (and drooped if raining) to protect the crew during their on-deck slumber. I can most conscientiously say that for six years in this service I always slept on the softest plank I could select, the chain cable affording an unexceptionable

pillow, and what was a great consideration, it was always in its proper place when required. All this time I was the owner of a magnificent bed and hammock, but which enjoyed a sinecure service only a degree lower than the "keeper of the sealing-wax" mentioned by Dickens. It is well known that the seamen of the Indian Navy are the healthiest afloat, whereas I saw half the crews of ships of Her Majesty's service on the sick list, when lying in Penang harbour with 14 of them, in 1821, through forcing the men to go below at a given hour to turn into their hammocks in the pestiferous tween-decks, to inhale the vitiated air which clung as a death vapour close to the sleepers' heads amongst the obstructive beams and carlines which would not let it freely escape. If this carbonic acid gas is hurtful to health, what must it be when its destructive properties are intensified by the other life-destroying gases generated in a ship's hold? And, as I said before, the better (*i. e.* tighter) the ship, the more deadly these gases. Take the ship's stock of fresh water for instance,—this is always generating and throwing off carburetted hydrogen gas in large quantities. Then there are dead rats, and occasionally a dead cat, putrefying in places not to be got at, besides lots of sweepings and rubbish which, by force of gravity and negligence, find their way into the lower hold, there to corrupt into bases, from which the more deadly sulphuretted hydrogen gas is formed. As a rule, ships of war have fouler bilge ways than merchant ships, because the latter are every now and again discharging cargo, and effecting a swept hold, whereas the war ship don't do this perhaps more than once in three or four years, in many cases from unavoidable causes. These facts may account for the crews of the Indian Navy enjoying such good health from the privilege of sleeping on deck in a pure atmosphere. When the *Fox* frigate was at Aden in 1846, the appearance of her men beside those of the Indian Navy was most remarkable,—the former delicate and sickly looking, whilst the latter had that jolly *insouciant* air and sun-burnt colour which proclaimed sound health without mistaken (though kindly meant) coddling. I may add from experience, that the Indian Navy are not only healthily cared for, but they are the best used, best fed, and the best paid service afloat. The usage of course depends mainly on the captain and officers. I need scarce say that there are ships in Her Majesty's Navy in which the crews are equally well treated. I speak of the average usage.

In conclusion I would remark that no patent law exists to obstruct a beginning, and to abstract the unwilling guineas for permission to do a good and wise work.

Bombay, 12th December 1857.

TOM CRINGLE.

THE WRECK.

SIR,—I to-day had a long peep at the Wreck of the *Natalie* from Malabar Point, and find that her back is *not* broken, as it was reported to be. She was lying very quietly, head to sea, on the rocky bed she has selected; and the reef being inside, another further to windward,

which breaks up the heavy rollers, the ship's position will ensure her remaining intact with masts and yards standing as they do at present until after the close of August, when means may be taken to save her cargo ; after taking out which, it will be ascertained whether she is worth floating into harbour to undergo repair. But if any attempt be now made to save the heavy portion of her cargo, the vessel, thus lightened, will bump herself to death in an hour ;—it is the weight now in her which saves her from destruction. The first time the weather moderates, the consignees would do well to send people to unbend her sails and send her light spars on deck. There is no fear of her masts going, to judge from the slight portions of her heel wood which have drifted on shore. The consignees should look out for land-sharks, who will soon be on board when the weather moderates.

If it is true that the outer Light-ship had drifted from her moorings (and it is not the first time a similar accident has happened), would it not be well to fire five-minute warning guns when our shores are clothed in the usual impenetrable drift mists which occur at this season ? The guns for this purpose might be used at Alibaug, Kenery Island, the Bombay Light-house, Malabar Point, and Worlee. Warning guns fired at certain intervals would take loads of care from the minds of navigators when closing in to find the harbour entrance channel, and save much property and loss of life. Even residents in Bombay of moderate duration can tell of ships coming to grief when seeking entrance in thick bad weather, but this season having been unprecedentedly boisterous and mist-clad, some recognised and made-known precautions should be adopted, especially when Light-ships break from their moorings.

24th July 1859.

TOM CRINGLE.

STEAM TUGGING ON THE INDUS.

SIR,—Whilst I heartily wish success to the Sind Railway Company in the working out of their scheme for the navigation of the Indus, yet I would put a case which, I think, requires solving.

Let us suppose one of their powerful "tugs" tearing down stream with six or eight cargo boats, each with 250 tons of merchandise on board, towing astern, when without the least warning, the tug bounces on to a sand-bank, will there not be a regular "smash in" to each other,—the counter of the tug getting the lion's share ? I have heard of a sailor Paddy putting his leg as a fender between two ships about to come in contact, but a bumping match such as I have assumed would laugh to scorn any fender devices.

If we reckon each cargo boat hull to weigh 200 tons, and her cargo 250 tons, this, for a train of say six boats, will give 2,700 tons, to be arrested at a moment's warning when at a speed (over the ground) of 17 miles an hour.

If there *should* be a pitch-in there will be "kettles to mend."

Bombay, 19th August 1858.

TOM CRINGLE.

INDIAN CAVALRY—REGULAR AND IRREGULAR.

SIR.—A letter in *The Times* is so full of laudatory praise of the Irregular Cavalry of India, that I wish to say a word for the *Regulars* before they are snuffed out of the Army List in favour of the Bayards or Gaston de Foixs that the writer likens the Irregulars to. If we could have their honour vouched for by bazar dealers, and by the inhabitants of the towns and villages their marches lead them through, I must confess I should receive it with far greater trust.

We know most of their doings through the pens of their admirers, who, of course, wish them to stand high in public estimation. Unfortunately, the Mussulmans of the Deccan have never earned very high honour of any sort. I admit their jaunty coxcomby whilst I deprecate the robberies and murderous slaying of their own countrymen, when as Mahrattas the English forces were extirpating their fine *honourable* forefathers in various parts of the Deccan. A regiment of these Bayards will about this time have to pass Corigaum, 15 miles from Poona, on the Ahmednuggur road, where they will be able to read on a battle monument that 800 sepoys, officered by Europeans, and three light field-pieces, with twenty European artillerymen, commanded by a Major, beat off *thirty-three thousand* of these heroic Mahrattas; and as it was customary for their armies to have four-fifths cavalry, I doubt not that some of the Bayard blood which ran away at the battle of Corigaum may still circulate in the veins of the present Irregulars. I firmly believe that it is a wise step to send these men as a part of the Persian Field Force, for, as the Persian Cavalry are inferior to our Irregular Cavalry in the grand military virtue—courage, there is every chance of the Persians making a good use of their spurs.

When I hear of the so-much lauded Irregulars *charging home* on a regiment of Russian Regulars, whilst under a sharp enfilading fire from artillery, I will believe in their staunchness, but I fear it will be found that their best point is to harass hill-robbers, charge a doubting foe, or pursue a flying one.

A word about their dress and arms. The former is unexceptionable for the body, but their “nattiness” has made them forget that their heads are liable to sword cuts, to guard against which they have a scallop of a turban on their heads, which is simply ridiculous in the eyes of practical soldiers. Their jackboots hide a faulty point in all natives—viz., baldy-formed legs, and untidy feet coverings; but that they are proper to a light horseman, who may be ordered to dismount to pursue hill robbers, or who, when acting as scout to an army, may be surprised in his bivouac by a night attack, I do not believe. Ankle-boots with soft upper-leathers, and cloth Albanian gaiters, would be more consistent with their duties in the field, and look better.

Let any horseman who has been trained to use a lance see those of the Irregular Cavalry, and they will at once reveal the fact that men armed with lances some sixteen feet long are just the fellows to pursue a flying foe; to use it under any other circumstances, I am sure they have not strength of arm.

In speaking of their riding, the writer alluded to says:—"The handling of their horses, and the rapidity with which they wheel, halt in full career, and again dash off like a bird on the wing, beat hollow any Arab or South American I have seen." The Arab he may beat in horsemanship, and have nothing to brag of, but to beat the hardy, dexterous, *lassoing*, fearless, South American rider is, I think, rather *too* strong and difficult of belief. The cunning Irregular has adopted a saddle out of which he could scarcely fall if he wished. Put him on a heavy dragoon's saddle without stirrups, and he would roll out of it like a bag of beans; but not so the heavy dragoon from an Irregular's saddle: he would feel as secure as a Titan, sitting on the roof of a building, with the calves of his legs just fitting under the eaves; nothing would shake his seat—except perhaps the nimblest of Calabrian earthquakes.

Of the Officers of Irregular Cavalry I have the very highest opinion, both for pluck and good soldierly qualities, which no doubt recommend them to their superiors for the posts they fill; and I also believe they are longing for the *home charge* I have described, which will then stamp their men with the mint mark of pure metal, not to be gainsay'd by

Bombay, 3rd February 1857.

TOM CRINGLE.

DEFEND YOURSELVES.

SIR,—If recent rumours have any truth in them, we are likely to be visited by troubles similar to those enacted in Bengal. Our rulers have no doubt profited by recent examples of treachery and bloodshed by making all the arrangements within their power to put down, with a crushing hand, the first and faintest effort to create a riot. No mercy should be shown, as a lawless mob of Asiatics invariably cast away humanity when their guilty passions are let loose.

But my chief object is to offer a few suggestions, which may not possibly have occurred to those who must guide our efforts if called on to deal with mutinous rascals or "looting scoundrels."

We have in harbour about 130 ships, with an average of say 30 men in each. If we reckon on only 10 men from each ship, we should have a bold and resolute Naval Brigade of 1,300 men. Most of the ships are provided with arms, and those that are not should at once be furnished from the arsenal. A private signal from the dockyard would cause these brave fellows, headed by their officers, to land in their own boats at any appointed spot, where a small staff of military officers could join them, and lead them into action.

I would also have the House of Correction provided with arms for the Jack Tars who are confined there. When blows are to be struck for England's honour or English life, Jack would unhesitatingly fight for it, prisoner or not. This place would also furnish a good rallying point for the Europeans. I had thought of sticking up a gun or two at Sion Castle, but these would involve the necessity of having European Artillerymen to work and guard them, and as the place is not tenable they

might be overpowered by a strong body entering the island by the Sion causeway. Perhaps the best plan would be to place two 9-pounder field-pieces in a railway waggon, attach each waggon to a break van, and put an engine in the centre.

Spirit of Cæsar, what a splendid moveable battery we should have! The break vans, with an inside lining of pressed cotton bales, would make first-rate magazines for the gun at each end of the train, and would afford shelter for the gunners if circumstances forced them to seek it. Our troops have stormed batteries innumerable; but where shall we find mutinous sepoys who would take a locomotive by the beard and draw its teeth, *i. e.* its guns? If a train thus armed were placed at Sion to close that road against mutineer marchings, we have staunch hearts enough in Bombay to put down all sedition and conspiracy within the Island. To Sir Henry Leeke and the Indian Navy I would allot the task of cutting off all communication between the native craft and the shore. The more effectually to accomplish this very important point, let the *Acbar* be patched up with all haste, and anchored so as to cover them with her guns.

If the Superintendent of Police were to issue confidential notices to the European inhabitants where to rally in the particular locality they live in, should there be any disturbance, it would probably inspire confidence, and give unity to fighting efforts. I also strongly advise Mr. Forjett to take away the lances from his mounted police, otherwise they are as sure to form the spoil of some Bhendy Bazar ruffian, as the latter is to be hung afterwards.

As I can't afford cavalry horseflesh, I leave it to others to mature plans for a mounted troop of volunteers; but if any Bombay Croesus will volunteer to lend me a charger, I have the knowledge and discipline, and hearty good will either to lead or be led.

19th June 1857.

TOM CRINGLE.

ENLARGING THE ISLAND.

SIR,—It is needless to say that the width of this Island in the neighbourhood of the Fort and Colaba is scarcely commensurate with our wants; I would therefore beg to draw the attention of Government to the beneficial effect which might be reasonably anticipated were *groins* erected on the shore of Back Bay, in the vicinity of the Cooperage, for the accumulation of sand. I would recommend that only two or three be put down experimentally, to test their efficacy, when, if found to succeed, their number might be increased with great benefit, and the accumulated sand be applied in the first instance to filling up to an uniform level the whole of the vacant space about the Colaba Causeway.

A sea-wall built across from the Apollo Pier to Arthur Bunder might gradually be constructed, and the whole of this valuable space won from the daily visitations of Daddy Neptune; and from the source

pointed out, a Sahara of sand might be poured over the mud and man-grove bushes now so loudly complained of.

Let us turn to the *groins* again ;—these should reach transversely across the line of shore, from high-water mark to the foot of the inclined beach, which in this case would not be very far. I am convinced that the movement of the sand in Back Bay has a circular direction, and if we can arrest this polka dance of the sand and apply it in the manner pointed out, the expense of putting down two jungle timber *groins* will not be worth consideration. These *groins* play a most conservative part on the coast of Kent, where they accumulate a vast quantity of shingle and sand, and thus save miles of coast from being inundated, and many important public works from being swept into the ocean in a single tide. When the Round Down Cliff (adjoining Shakspeare's Cliff) was blown down, it rolled like a fluid wave into the sea, and thus formed a *groin* which prevented the passage of the shingle eastward, which before used to block up the entrance to Dover harbour. But in this instance the arrestation of the shingle was overdone, for the shore opposite the Dover railway terminus having been robbed of its proper supply, became denuded, and a gale of wind occurring caused the destruction of a large portion of the terminus.

I have often been surprised that it never occurred to the engineers belonging to that line that by cutting a channel through a suitable part of the Round Down Cliff debris, the shingle would again travel east through the gap so cut, and clothe the beach to the depth necessary.

If you could find a place for this last paragraph in your Overland Summary the hint might prove useful.

Bombay, 19th July 1857.

TOM CRINGLE.

OVER-ARMED POLICEMEN.

SIR,—In a letter published in your journal of the 19th June last, I advised Mr. Forgett to take the lances from the mounted police, otherwise they are as sure to form the spoil of some Bhendy Bazar ruffian, as the latter is to be hung afterwards.

A police case in your columns of the 26th instant, shows that Edward Navin, of H. M.'s 86th Regiment, when drunk, took a native mounted policeman's sword from its scabbard, and severely wounded his horse. The policeman, by way of apology for permitting this assault, said "he was unable to use both his hands, *as one held the lance, and the other the reins.*"

This plainly shows how unwise it is to arm a man, who has to deal in mob rows, with more weapons than he can manage. I have not any reference by me as to how brave thunderbolt Kerr of Kolapoore fame had his troopers armed, but I think I may safely assert that they did not perform their valorous deeds with lances in their hands. A good pair of spurs, and the will to use them, will always make *the sword*

reach as far as the lance, and with repeated quicker effect. A Lancer after a failed lance thrust, is completely at the mercy of a swordsman, and to save his life he must either flee or throw away his lance, and take to the horseman's proper weapon,—the sword. Even if he decides on the latter course, he must (if he can) "haul off" from his opponent till he gets time to draw his sword, and although this could be done in five seconds, yet there is the stern, confident, sword-armed dragoon capable of giving two deaths in the momentous interval. The lance has a pleasing and glittering effect, well suited for holiday times and purposes of display; and I think our military authorities act wisely in training all dragoons in its use, as their horses become accustomed to the wave of both lance and pennon, and the men also learn that it is a "great sham,"—like Delhi mutineer's war-cry, great noise but little heart in it.

Bombay, 30th August 1857.

TOM CRINGLE.

BARNUM BUNKUM.

SIR.—The doings of the Mutineers have, no doubt, an absorbing interest in them, but why exclude the scientific news furnished by the Bombay Geographical Society? A worthy philosopher townsman has twice lectured on a meteoric stone which he picked up in Egypt. These lectures have been published in the Transactions of the Bombay Geographical Society, amongst the members of which body they created rather a sensation. But in an evil hour our philosopher (who would not let well alone) sent the stone to be analyzed by that matter-of-fact man Dr. Giraud, who not understanding the worthy philosopher's joke, pronounced it to be a fragment of a *cannon ball*! Had our philosopher known very little of chemistry he would have been aware that meteoric stones contain nickel and cobalt; whereas the cannon ball fragment lacked those essentials to support the cherished theory. Just fancy the scientific fervour (rendered more fervid by an Egyptian sun) with which our renowned geologist stooped to seize this stray waif from the moon,—with what ecstatic joy it is slung in his handkerchief, and hidden like miser's gold until it can be safely stowed in the "Old Curiosity" chest in the steamer's cabin, the only source of regret being that he is not steaming to the lecture-halls of polite England,—where no nose-poking Girauds rudely dispel these fond delusions, as there no such mistakes are thought of,—instead of going to vile, unbelieving Bombay, already crowded with exploded mares' nests from the same Old Curiosity Box. Was Barnum's "Fejee Mermaid" or his "Woolly Horse" equal to this attempt at palming on us a fragment of a cannon ball for a meteoric stone?

This little affair puts us in mind of a capital story told of a geological pupil of the philosopher's own training, who, a few years back, paid a visit, accompanied by Mr. L * * * *, to a friend near Tannah. The host, a noted wag, had the day before the visit picked up a black chip of something, and put it in his pocket, observing to a friend that he would puzzle the geologist when he next called. Behold him arrived,

and the announcement made that the "curious specimen" only required to be taken from the pocket to shut the pupil in the vestibule of outer geological darkness. Poor L * * * *, with his stolid look, assured our wag's friend that the pupil would not fail in the learned trial, "See if he would."

Oh, that science should be so trifled with! Our incorrigible joker, after a mock fumbling in his pocket, like a Dutch housewife fishing in her capacious receptacle of the same name for the family soup-ladle, at last clutched the "specimen," and flourished it before the eager eyes of the pupil. It was seized, and, in a moment, its geological strata position pronounced with the air of a Lyell! Reader, *it was a chip from a vitrified brick!*

I can never get the "wag" impostor to give the details in a sober and sedate manner, as he invariably goes into cachinatory convulsions at the richest part of it. Beware Monk barns of these Edie Ochiltree chemists in future.

Bombay, 10th December 1857.

TOM CRINGLE.

MONUMENT OF THE MUTINIES.

SIR,—I have just finished reading an article on Cawnpore horrors, copied into your columns of the 10th October from the *Examiner* of the 5th September. *The Times* recommends that Delhi should be razed to the ground, as a memorial of just retribution.

I would do this and more. I would pile the *débris* of its ruins over the palace of its King, until a pyramid were raised rivaling that of Egypt's *Gizeh*. In the centre of this pyramid should be built a circular well 20 feet diameter, its base resting on the choicest spot of the King's palace. Thus pyramid and *charnel* well would ascend together until the apex was attained.

The reader may with reason ask by whose hands is this "*Retributive Monument*" to be raised? I say, by every mutineer against whom even collective cruelty can be charged. Who is to superintend the erection of this great *Gomorrah* monument? I again say, "Nana Heliogabalus," *Saheb* no longer. The name of Heliogabalus is so appropriate, and events in both their lives are so singularly alike, that one is half led to believe that *Nana's* soul must have resided in the body of *Heliogabalus*, in accordance with the belief in the transmigration theory. Yes, Nana Heliogabalus should superintend *the labourers*, and the relatives of those slain by the *monster* should command the superintendent. Every labourer that committed himself by laziness, or attempted desertion, the proxy *Superintendent* should be flogged—not *too hard*, only sufficient to give him a keen sense of corporeal pain. I should wish N. H. to live to see the work finished. Other great men build *their own mausoleums* whilst living, why should not he? This should rival that built by *Artemisia* for her *Carian* dead king.

Economists may inquire who are to feed the mutineers whilst engaged on this great work ? I say again, every village whose inhabitants abetted the villains should have a grain tax imposed to feed the *Memorial* builders. As the pyramid and its charnel tube were raised inch by inch, so would its builders die of toil one by one : Brahmin, Mussulman, Purbeah, Mhar, would find a common grave in its circular depths, till the pile was finished and the Golgotha circle arched over, *except a hole two feet square*. Over this sepulchre of fiends I would then raise a Titan figure of *Justice*, built of stone, rough, but massive, to accord with the pyramid. The figure should be armed with the sword of *Retribution*. When all was finished, and Nana Heliogabalus had viewed the *Avengers' Pyramid* from various points of a hundred mile circle, *then* I would take him to the fatal opening in the well, and thrusting him through head-foremost, say, "Down, down to hell, *monster* ! and say I sent thee there ! "

Then might the Tartarean gullet be closed, and on the base of the pedestal of *Justice* (the "*Justice*" of *Punch's* last number) should be inscribed—

BENEATH THIS PYRAMID
LIE BURIED
A PALACE, ITS KING, ITS PRINCES,
AND THE MONSTERS OF THE BENGAL NATIVE ARMY THEY
INCITED TO MUTINY, TO MURDER, AND OTHER
CRIMES UNUTTERABLE.
STRANGER !
IF YOU WOULD KNOW WHERE
DELHI WAS,
BEHOLD ITS DEBRIS IN THE PYRAMID YOU STAND ON.
ANNO DOMINI MDCCCLVII.

No army would in future be required within sight of this monument of a nation's just wrath.

Bombay, 11th October 1857.

TOM CRINGLE.

THE COLABA REFUGEES.

SIR.—A great deal has been said about Englishmen from Colaba going aboard ship out of harm's way on the festival of *Bukr Eed*. This must surely be false. And the Colabawallas above all others, too ! Why, I really believe, taking able-bodied alone, that the English residents of that locality would equal the natives. It is all very well, perhaps, for women and children to be placed in security, but for Englishmen to quail for a moment before a native mob is something so incredible as to pass belief ! And we, too, of a race that has so many noble memories to fall back on ! Did our countrymen not neigh for the

battle at Alma? Did they reckon odds at Balaklava? Were they not isolated bands, each a Coclèsin himself, commanding the wave of battle to retire at Inkerman? And what an ebb followed! Are we, the descendants of the men who fought at Agincourt, Cressy, and Poictiers so fallen that dastardly mob, whether Hindoo or Mussulman, should for a moment engage a thought other than to go out and crack a pate or two, and send them skeltering to the devil? Why old Dentatus would have placed his back against a cotton bale, and engaged them by the score for a day, and would have blushed to name the occurrence! Our race has performed too many deeds of valour in India to make us believe that Englishmen, on the overland passage, leave their pluck at Gibraltar under the guardian spirit of gallant Elliott.

Even if we have cause to doubt the faithfulness of the handful of native troops we have in Bombay, what could they do in a huge place like this? We have no scattered cantonments for them to revel in. The fortress guns command both their lines, which, in ten minutes could be made the graves of themselves, wives, and children. This fact alone is sufficient guarantee for their fidelity, if grateful recollections of the fostering care of the Government for a century back had no place in their memories. Whom have we next to fear? Not the merchants and dealers; their warehouses and bank balances are *their* hostages. I trust they will not think for a moment that an Englishman in Bombay doubts *their* loyalty. They have too successfully watered their "Pagoda trees" under the fructifying sun of British rule, not to have a wholesome horror of mob spoliation. Lastly, then, we have the unmistakable "*unwashed*" to deal with. These might succeed in "looting" a sweetmeat shop or two, but if they ventured on more extended deeds, we have a force of English hearts in our seamen and artillery, which would crush them like a thunderbolt, and that, too, without calling on a native to assist us. Our matchless infantry could hold all the important posts, whilst our "prentice" hands would skim the pot.

I ignore the very *chance* of up-country rebels coming into Bombay in force. On reaching either of our terminal stations they would, of course, insist on a special train being instantly provided for them, and by St. Stephenson I should like to play station master, driver, and guard for them. At the first "1 in 100" I came to I would leave them at the bottom of it, whilst I proceeded with the engine to the summit, and then giving the iron horse enough of the spur, charge home *such* a plumping "syncoper," that all of them who woke up on arrival in Bombay would long more for a skilful leech than a rich "loot." No, no, if our railway locomotives and their attendant satellites are only properly made use of, no rebel force *can* enter Bombay.

I have heard regretting remarks on the paucity of native troops in Bombay. Now, I think, this is one of the wisest courses that the Government have adopted, they are just few enough to feel isolated, whether for action or up-country "predilection."

"*Vivat Regina!*" and a fig for rebels and "*shipping accommodation!*"

Bombay, 5th August 1857.

TOM CRINGLE.

PALMAM QUI MERUIT FERAT.

SIR.—I have just finished reading Colonel Wheeler's letter of explanation to the Assistant Adjutant General as to the part he had played in attempting to convert the sepoys and other natives about him ; and however much it may be regretted that the good *round* old man had got into a *square* hole, still one cannot but admire his stedfast boldness in vindicating what he conceived to be his religious mission.

Now I would take the liberty of asking, Have you done *your* duty as one of the expositors of public feeling, in awarding praise to the Government of Bombay for their admirable arrangements on the great Mohurrum day, for which not a sign of preparation met the public eye, yet when the dreaded day came we saw in a moment that the safety of every English throat was as fully assured as if swallowing unctuous caliphee at my Lord Mayor's November feast ? The strategetical disposal of the troops was equal to some of Cæsar's best efforts in his German campaigns. The pairing off of the Asiatic tigers in small manageable squads with our British Van Amburghs, forming as they did a cordon which occupied every road leading to *Lootville*, and all other European bungalows around the Native town, should ever form a text manual for similar occasions. Thanks to Mr. Forgett.

If we look in a wider circle, the suppression of the Kolapoore mutiny again commands our admiration. No sooner had the mutineers committed themselves than they were pursued with such sleuth-hound pertinacity, and from so many quarters, that they knew not what to do, with their blood-stained dear-bought liberty, so turned like hunted hares either to die in their "forms" or at the cannon's mouth. If I have read aright, the chief success in suppressing this mutiny was due to the promptness with which troops were sent from Bombay to Rutnagherry. The mutineers had descended the Ghaut leading to that collectorate city, and were hurrying on with the assured conviction that the sepoys there stationed would fraternize in the hellish work of setting the Southern Concan in a blaze. But the news of the arrival of a steamer with English troops scared them from this lowland Scylla, but only to fall into the mountain Charybdis from whence they started.

It appears to me that all the Bombay newspapers are ready enough to blaze away at nearly all Governmental measures, yet each one fears to lead in bestowing praise until he can ascertain what the other two Mrs. Grundys will say. Now I fearlessly assert that were this system pursued by any one out of your own infallible circle, it would be called cowardly snobbery. Your triumvirate cry is ever "To the Tarpeian Rock !" Have your ovation wreaths become so withered from disuse that you have none to bestow, however well earned, on Lord Elphinstone.

Bombay, 23rd September 1857.

TOM CRINGLE.

THE DELHI HEROES.

SIR.—In the *Bombay Gazette* of the 18th instant you published from the *Lahore Chronicle* an account of the heroic conduct of Mr. Con-

ductor Buckley, who, after being wounded whilst defending the Delhi Magazine under the gallant and lamented Willoughby, made good his retreat from the exploded ruins, assisted alone a helpless woman and her little son to cross the river on her way to Meerut, which place they reached in safety. After this kindly deed poor Buckley falls into the hands of ruffians, who strip him to his shirt, wound him in five places, and leave him for dead. Life being strong in him he recovered, to wander *twelve days in the jungle*, and then fell in with Lieut. Raynor and his family who, like himself, had been stripped, and were in sore tribulation. Let us for a moment reflect what this gallant fellow must have suffered whilst tracking his weary road in the jungle for twelve days, with six wounds on him, and without clothes to protect him from the scorching sun by day, and the cheerless dews by night, from hour to hour of which he could not calculate on life! As related, he meets Lieut. Raynor and family, and again they fall into ruffian hands, yet the hero Buckley, although wounded, and having just past through his dreadful travail in the lonely jungle, is as full of noble, martyrlike, self-denial as ever, and generously offers himself as a sacrifice for his companions if his captors will not insult the ladies who are with him. To win this boon from the blood-gorged men who surrounded him, he *four* times submitted his neck to the deadly stroke, with a ruffian foot on his head! I am not surprised that superhuman courage like this commanded the admiration even of his captors, and won the freedom of himself and companions.

Talk of Curtius leaping to death when surrounded by all the military pomp of Rome, and urged thereto by the applauding voices of a grateful city! Why Buckley must have suffered the pangs of death four times over. Not like the other, who knew his name would be embalmed in history for ever, our hero deliberately offered himself to save his (probably unknown) country-women, whose lives hung in the trembling balance of a savage mind. Ye editors! if deeds like these be not published wherever the English language is spoken, who will care to read in your columns that a Podgkins is born?

I now beg, Mr. Editor, that yourself and brethren of the Press will advocate, and consent to receive subscriptions for a gold medal to be presented to Mr. Buckley for his noble conduct, the device and inscription on which to be left to Mr. Wyon of the British Mint. The same subscription to furnish also a gold medal each for the *Heroic Nine* of the Delhi Magazine. Although the gallant Willoughby and Scully so nobly sacrificed themselves by blowing up the Magazine, and unhappily are not amongst us who would delight to reward their high and noble courage, yet they have no doubt mothers, sisters, husbands, or brothers, to whom such a memorial as I propose would be a cherished monument of the loss they have sustained, whilst on the breasts of the living the medals would mark their wearers as the **HORATIAN SEVEN** of the Delhi Magazine.

But Buckley's conduct after escaping from the Magazine, and doing the deeds I have feebly related, should stand out for distinct reward, and there is not a lady in this country, I think, who will not be glad to share the honor of rewarding his noble conduct.

I send my mite of Rs. 10 as a beginning, and I can say with Christian truthfulness that I consider it an honor to take part in this work.

Bombay, 20th August 1857.

TOM CRINGLE.

A PLEADING FOR "KOOMPANEE JHAN."

SIR,—Are we ambitious to imitate the base Sepoy Mutineer, that we too toss up our caps and cry "Death to King Log?" Was King Stork so beloved of the fools he was called to reign over, that they were happy in the change?

Who are the men who call on the East India Company to deliver up this "bright jewel," after having won it in many an arduous battle, and who have governed this country with wisdom and justice that men should deem marvellous, when we reflect on the enormous extent of territory, and the multifarious religions and caste prejudices of its inhabitants?

I am glad to see that Bombay and Madras have not joined in this insane cry for a change of rulers,—a cry engendered by deferred mercantile gains, from causes beyond the control of man. Calcutta appears to have been deeply bitten by this Brutus cry of "Death to Cæsar!" These Achitophels should have known the British people better than to imagine they would listen to a great political question presented to them when Rachel was mourning for her children, and coming as it did from the wallet of a grievance-monger, such as the Editor of the *Friend of India* has so unwisely made himself. The English Newspaper Press must always carry with it the good wishes of every true Englishman. It has ever been the faithful guardian of our political liberties, and the judicious guide of our social conduct. It is equally serviceable to good Governments in exposing folly, and frowning down the turbulent. But it must be admitted that directly the "Gagging Act" became law, one or two Newspaper Tells were impatiently wishing for some Gesler to elevate the obnoxious hat, in order that they might be "seen of men" in the market-place to court martyrdom by plucking down the symbol of obedience.

In periods of political trouble and war (and how great an one here?) the British people invariably bury minor party grievances when the public welfare demands the sacrifice; and the Editor of the *Friend of India* will find few willing ears to listen to his very questionable personal wrongs, or to his ambassadorial mission from the Calcutta separatists, whose political grievances look deuced like a decayed gooseberry from the same bush.

In reading the daily pabulum of domestic news, the glorious battles of our brave soldiers who *did not complain*, together with the usual political comments of the Indian Newspaper Press, I was either so blind, or stupidly content, as not to notice that the quill-tongues of our Editors were so immovably rivetted as to prevent them writing all that a prudent man might wish to read when the country was in a blaze of military rebellion. A patient told Abernethy that when he raised his

arm it hurt his shoulder. The sage Doctor replied, "Why the devil do you raise your arm then?" Dr. Lord Canning gave a generous warning to his (im) patient of the "Friend" not to raise his arm, the hand of which unconsciously clutched the torch of disaffection, as it was so thought not only by Lord Canning, but by his Council also. The Calcutta Memorialists do not appear to have reflected that the very *marrow* of their wishes is an absurd contradiction. They rattle their galling chains of slavery (!) and point to Lord Cauning for relief,—a Crown Government man, appointed no doubt by Lord Palmerston, and the appointment sanctioned and approved of by another Government man, and yet they want another Francia Paraguay from the same Upas tree! Ghost of Bentham! what *do* they want?

Who first raised this Janissary cry for an Indian change of rulers? Sir Erskine Perry, whom we honoured as a Judge. But after having filled his money-bags under John Company's cornucopia, it looked very ungrateful and Brutus-like for him to give the first stab. However, I think he has found it far easier to reach his senatorial seat over *Crino-line* stepping-stones than he will to swap us over like Russian serfs to masters we care not for. Poor "Koompancee Jehan," I regret to say has suffered most from his ungrateful Gonerils, with whom he has shared his wealth with an open, liberal hand, befitting his princely character. I have served him for twelve years, and ever found him a "good old English gentleman." All that is now urged against him is the venial fault of over-indulgence to the nigger footmen in the servants' hall. The "Black Act" he liketh not, and those who framed the Procrustean edict have cause to regret it now, when the budding, expectant Judge of Englishmen has transformed himself into the full-blown Traitor.

Where are our Willoughbys, Sykes, Reids, Wardens, Wathens, Blanes? Have they no lance to couch in defence of their liege lord? Have they nothing to say of the benefits which the East India Company have conferred on India?—nothing of canals, roads, bridges, stage-bungalows, electric telegraph, railroads, colleges, museums, hospitals, vaccination, public dispensaries for the Native poor, education of the stingy rich and the penniless poor, Government aid to scientific societies, libraries established thirty years ago at every military station for soldiers,* savings' banks, &c. &c.? But as these are mere trifles, not worth mentioning, I will pass them by without comment. Poor John, how thy detractors belie thee!

Who wishes for Crown Government? Have they governed so well as to leave no ripple of complaint in their political wake? Did our American Colonies get their complaints redressed until they wrested themselves from our grasp for ever?

The Sugar Planter of Cuba has cast his slave manacles over the once world-famous West India Trade, when her Merchants vied in riches with the Indian Nabob.

* Thirty years before the Imperial army had any.

Canada was ripe for severance from British rule, and only for the leaven of loyalty we possessed in the pensioned Veteran Officers, this fine Colony might have passed from us also.

Australia impatiently shook the leading-strings the mother country persisted so long in binding her with. She now runs, a sturdy brat, the envy of nations, and with every element that can lift a people to greatness.

How many "mild negro" policies have afflicted the thrice-ruined Cape Colonist, until it is now discovered that we cannot make "silk purses from sow's lugs," nor good citizens from rude barbarians!

Ceylon has uttered her wailing cry to Pharoah, and she has to thank the more liberal Government on the other side of the Straits of Manaar for her deliverance and concessional railway.

Have we so quickly forgotten the decimation of our Crimean Army by blundering starvation, that we are impatiently eager to place our necks under the same yoke?—Look on the converse of the above picture. A cavalry regiment was wanted to proceed to the Crimea. The Bombay Government, with unprecedented despatch, put them with arms and horses complete into transports, which, towed by steamers, landed them at Suez without a ruffled hair on a horse; and they appeared in the Crimea the admiration of every one who saw them. Again orders are received from home to give Persia a good thwacking; when, with a celerity which raised suspicions that the lamp of Aladdin, so far from being lost, was habitually carried about in Lord Elphinstone's coat-pocket, ships were loaded with men, material, horses, guns, and baggage-ponies; a Land Transport Corps was improvised; an electric telegraph was not forgotten. Every blade of grass which the horses were to eat had to be compressed, and presses were invented by our sharp Commissariat Officers, who, by a rub at the lamp, had agents dotted all over the country buying everything to send every where up the Persian Gulf. Bunder-boats were strengthened and transformed into gun-boats; special boat gun-carriages were even made by working early and late. Not a bite or sup for man or beast was procurable in Persia; even the materials, for building comfortable barracks for an army were put in hand with lamp-like magic. A thousand carpenters occupied open spaces where planing, window-framing, adzing roofrafters, and fitting floors was the order of the day and night. Here were no all-powerful-to-get-work-done contractors; all had to be planned by the Government, and was planned with a completeness and considerate liberality which has made the flesh-pots of Persia as much to be talked of by British soldiers as were those of Egypt. In this expedition, the excellence of the shelter and living was only excelled by the excellence of the fighting. Yet Calcutta asks us to exchange our Elphinstone, Outram, Birdwood, and Co., for Simpson, Filder, and Co.! Folly and impudence can go no further.

Then see the statesmen and warriors the Company have reared by their "faulty system." If the Crown have possessed their Wellington, Wellesley, Napiers, Hill, Crawford, Colin Campbell, Havelock, and many others too dear to English hearts ever to be forgotten, still the

majority of the above reaped all their greenest laurels on Indian fields, and that too with the Company's accessories,—material and good management. On the other page of fame stand the names of Clive, Hastings, Malcolm, Munro, Metcalfe, Raffles, Mr. Elphinstone, and his nephew Lord Elphinstone, our present Governor, who richly merits every praise for the cool calculating wisdom and courage which has signalized every act of himself and those about him! Besides which, we have, our Stanford (of Corygaum), the two Lawrences, Pollock, Sale, Frere Colvin, Outram, Jacob, Neill, Edwardes, Wilson, and a host of others, the whole forming a galaxy of statesmen and warriors unrivalled in the world. Many of these were mere youths when they acquired political renown and warlike fame, which grey-beards have envied and sighed for.

The chances of getting a good Colonial Governor, or a good wife, have been compared to the good or bad fortune of pulling out the one solitary eel from a barrel of snakes. Bombay happily pulled out a Gymnotus of the first water, that has electrified all those who have dared to wag a rebellious finger. Lord Canning I think did quite right in applying the "Gagging Act" to the English Press, but it should not be forgotten that he had only just arrived at his seat of Government when he had to contend with lightning bottled in a former reign, and was therefore entitled to the hearty co-operation of the Calcutta press, from patriotic motives alone.

I may also remark that this letter was written before the arrival of the English Mail on the 22nd October, and by which I find that the Calcutta "Memorial" has met with the contempt it deserved.

In the political abstracts of the *Home News* of the 26th September 1857, an article from the London *Times* is given, which is an exposition of what is fairly due from the Indian Press towards the Government in times like the present. In the 3rd paragraph, the writer has given such a perfect daguerreotype picture of the Native character, in lending itself to delusions, that I need make no apology for transferring the article to these pages.

Bombay, 22nd October 1857.

TOM CRINGLE.

From "The Times."

As it was never imagined that India was to be governed precisely as we govern ourselves, so it was never supposed that the press stood on the same ground there as at home. The liberty of the press has in this country been exalted to the rank of a sacred principle, the Palladium of the constitution, an inherited right, the safeguard of personal freedom, and the only check upon political tyranny and official abuse. These are indefinite and absolute expressions, but they who employ them have an honest and wholesome conviction that a free press is necessary to a free state, and that there is something intrinsically honorable and beneficial in a state of society in which everybody may publish, within reasonable limits, his belief and his opinions. The freedom of the press

is, however, a practical question. We maintain it on such practical and assignable grounds as that it throws continual light on the administration of public affairs, on the proceedings of official personages, and the working of the whole system; that it gives a vent to feelings which might otherwise smoulder in a more malignant form; that, on the other hand, it provides a check for its own excesses in the constant opportunity of reply and contradiction, and the disgust which calumny and falsehood will always excite in the minds of a free and generous people. Such a defence is true as far as it applies to such a state and such a people. We believe that, in matter of fact, it is impossible for the press of this country to do any amount of mischief at all to be compared with the evils certain to ensue on a withdrawal of this check. The press cannot damage a good measure; it cannot overthrow a good government; it cannot destroy a well-grounded reputation. The least symptom of a malicious design to attain these ends is certain to recoil on the authors. These things it cannot do, though they are quite within the ordinary scope of public men, and are the frequent aims of parties and politicians. The public at large are far more ready to accept the rhetorical exaggerations of some enthusiast or partisan on a platform, of some adventurer or rival in the senate, than of the nameless writer who sits down to a dispassionate discussion of persons and things. The "we," to which some alarmists have attached so tremendous an influence, and which it has been proposed to rob of its dark terrors and clothe with some vulgar impersonation, is, perhaps, the most cautious and scrupulous writer of the day. In the absence of a great name, the pen is found to appeal to facts and considerations within everybody's knowledge and reach, and to go no further than the public is prepared to go with it. Once it transgresses, once it aims to be an independent authority and an organ of mischief, it finds everybody's hand turned against it, and it has to defend its ground against a thousand writers and talkers only too glad to find a common butt for their invective.

For the truth of these remarks on the real impotence of a free press in a free country for any evil purpose, we need only refer to the fact that none use it so freely as they who in moments of petulance have thought fit to denounce it. It is a matter of frequent occurrence for men who but the other day were abusing the newspapers, and putting anonymous writing on a par with assassination, to make the freest use of these or other columns, and, as often as not, find by their own experience that it is no easy matter so to write as to incur neither contradiction nor rebuke.

These are practical considerations, and they apply to England, but not to India. Though our government of that country is infinitely more conducive to happiness, freedom, and elevation than any government that its former rulers or the people themselves ever devised, yet it cannot be called self-government or constitutional in the same sense as ours. In fact, India cannot govern itself; it never did: and the first step in the attempt would be a war of extermination between Mahomedan and Hindoo, then between the different sects of the former creed. So we govern India, and impartial authorities have said there is no country in the world so well governed as India, and that England

herself cannot exhibit such proofs of government at home as can be shown in her great dependency. We are the lords of India, and hold the balance of power between innumerable races, religions, dynasties, laws, and pretensions of all sorts. In doing this we have to appeal to the gratitude, the fear, and respect of two hundred millions of people, who are, perhaps, the simplest and most credulous on the face of the earth. It is the very soil of delusion. The religion of the vast majority is not merely an ancient mythology, believed because it is there, but a living source of the most preposterous inventions. Indeed, there is hardly anything that the Hindoos may not be made to believe. They will accept with equal facility, on any or no authority, and without the least investigation, a tale of private scandal, a libel upon a government, an astounding miracle, a new revelation, the deification of a plant, a stream, or a stone, a prophecy, the decline of a dynasty or the decay of a godhead, a curse, a code of morality, or anything whatever, so long as the appeal is made directly to the faith, and reason be carefully put out of the question. All that is spontaneous in the social system of the Hindoos is of the most imaginative and irrational character. From the highest rajah to the lowest mendicant, they yield their faith, their conscience, their purse, and their lives to the leader who makes the most extravagant demands upon them. Accordingly, for themselves, and among themselves, they altogether eschew freedom of discussion. As for the Mahomedans, they know no such thing as liberty, and can have as little to do with a free press as with a House of Commons. In such a population, then, there are wanting those checks which we have admitted to be necessary, and which we have asserted in our own instance. Our direct hold upon India is our military system, and the Chief material of that system is a native soldiery. As it is the most powerful part of the people, so it is the most informed, the most gregarious, the least occupied, and the most liable to have a stock of grievances against us. If it is assured by designing persons in a tone of authority that we are planning to destroy caste by the secret use of forbidden materials; that we are preparing to take the sepoy to the ends of the earth; or that this is the prophetic period of our expulsion, it will most probably believe what is told. It may never see the contradiction, or may not credit it. At all events, it is not competent to detect the imposture, and consequently, has not the requisite safeguard against the abuses of a free press.

Such are the considerations that have determined—indeed, we may say compelled—the Indian government to restrict for the present the liberty of the press. It does not by any means give up the principal, and it expressly reserves the grounds upon which a free press was given to India, now twenty-two years ago. That Act was avowedly an experiment, or temporary concession, made with the full consciousness that it might be abused, and that circumstances might arise to compel its suspension. The present Act of Council, therefore, is happily, not retrogressive, and merely implies that an occasion has come such as was contemplated by the authors of the Act of 1833. When it is found that the native journals published in Hindustanee and Persian contain, besides the incendiary proclamation known to our readers, the most

lavish abuse of the government and its agents, promises of immediate emancipation, and directions to the native army how to further that object, it becomes a matter of common sense and obvious necessity to prevent the press from being the organ of rebellion. That is all that is intended. The only difficulty of the question is its bearing on the Anglo-Indian press. To the home imagination there is a certain necessary connection between the English language and liberty of speech. But everywhere and in every native regiment there are sepoys who read English, schools where English is taught, and native officials quite ready and competent to translate sedition into any Indian language that may answer the purpose. In fact, there are two journals at Calcutta published and edited by natives in the English language, and these journals have contributed their shares to the insurrection. Practically, it matters little or nothing whether dangerous arguments, treasonable counsels, and useful information are given in English or in any native tongue, or whether the publishers be English or Indian. In the present critical situation of the Indian government it must take a plain, not to say a military view of the question, and silence not only the mutineer in arms, but the writer who blows the blast of war. The Indian government have carried out the present measure with great moderation. It would be mere pedantry, then, to ascribe to it a settled design on the press, or on those principles of liberty which we all cherish at home. What course it may have to take for the future is a matter for further consideration.

"FIDELITAS" AND THE "BOMBAY TIMES."

SIR,—The learned and accomplished editor of the *Bombay Times* has condescended, in his to-day's paper, to notice, *somewhat* disparagingly, a small production of mine, lately issued under the title of "A Pleading for 'Koompanee Jehan.' " * I beg you will accord me room in your journal for a word or two in reply.

* That our readers may fully understand the merits of the case we republish the remarks of the *Bombay Times* in full.—ED. B. G.

"We have received a pamphlet, entitled 'A pleading for Koompanee Jehan,' to which we turned with some curiosity, believing that a man who took upon himself the task of volunteer counsel, would have taken some pains, at all events, to master the case he had undertaken to defend. A dozen and half a pages of excellent print, more replete with conceit, ignorance, and absurdity, we have rarely met with. It is assumed that Sir Erskine Perry was one of the first to raise the cry against the present form of administration. The worthy man seems not aware, that in 1783, the constitution, the maintenance of which he recommends, was protested against by some dozen of peers of the realm, and was only carried through by the direct interposition of the Sovereign, after a bill, closely resembling that now desired had passed the Commons of England. He seems equally ignorant of the fact, that from this date to the present time, the Government of India has been exclusively and entirely in the hands of Her Majesty's Government, and that 'Koompanee Jehan,' who was slain and buried in 1834,—and whose name was only preserved by a lying signboard over his door,—has no more to do with it than 'Fidelitas,' unless when it so pleases the President of the Board of Control. 'Koompanee Jehan' has himself most fully admitted of the short-comings in matters of the public

The learned journalist, because my brochure does not contain the 200 pages of Mills's History of India he recommends, together with a modicum of Blue-book, throws it down, and says it is "replete with conceit, ignorance, and absurdity." Now I so fully deny the "conceit," that if I thought I had one particle of it I'd turn Pandy and get hung out of the world at once. Then the "ignorance;" I would not for a moment have the worthy editor think that I wish to enter the literary lists with so learned a man as himself. But incredible as it may appear, I know that the Crown officers have virtually governed India from the date he specifies; and this being the case, what benefits are to accrue when the "lying signboard" is taken down from over John Company's door? When the red-letter day arrives, will the Crown send out a ship-load of men of such purity of morals and transcendent administrative abilities as will put to the blush our present officials? It is this very fact which made me ask that as the Crown *does* govern this country, where is the change of rulers to come from, and what object do the Calcutta memorialists seek?

I am not an advocate for the "Gagging Act" being put on the English press. It would have been just as well to have given an intimation to English editors of what was expected of them as patriots? but when it *was* imposed, the wisest and most generous course would have been not to have sounded the trumpet of recall for Lord Canning, who, as a newly-arrived Governor, was, under all the circumstances of the crisis we have hardly yet passed through, entitled to the whole soul-and-body support of every true Englishman.

I do not wish to lengthen this letter by extracts from Mr. John Connon's "Letter to J. B. Smith, Esq., M.P., on the Application of British Capital and Skill to the Development of the Resources of India," but I would humbly recommend it to your contemporary's study. It contains so many upright, manly, and honest truths throughout, that as a friend of our worthy fellow-citizen, I really wish he had had the honor of being its author. Your contemporary has us at an immense disadvantage. I for one have to remain in India, in a manner wedded to the soil, whereas our worthy Doctor, after being bitten by every cobra editor in India, runs away home like an ichneumon, takes a nibble from the tree of knowledge, and returns armed to the teeth with Blue-books and Lecture laurels, and, lacking a foe more worthy of his lance, he runs full tilt at my poor little "thank-offering to Truth" as though

improvements, on which his friend compliments him. What a pity, that when would-be authors take pen in hand, they do not take a little trouble in turning up the Acts of Parliament, the Blue-books, the Annual Register, or the fourth volume of Mills's History of India. A couple of hundred pages of this last-named work would suffice to save a world of blundering and mis-statement, such as anything but serves the cause meant to be promoted—and which must be indeed a desperate one if it could command no better counsellor than this. There is some chivalry certainly in taking the field in a strife so hopeless, and so close to its conclusion. When the altered order of things comes into existence, our Willoughbys and Sykeses and other able and upright men, whose aid is invoked, will be the first to admit the error they have committed in resisting improvement, and to proclaim the vast advantages of the change, under which, we trust, the state will soon obtain the benefit of their services."—*Bombay Times*, October 28:

it were a gage of political battle from Thomas Carlyle. And at a most inconvenient time too, for I had intended to have called on him to get solved a geological puzzle, which no student of Indian geology has to my knowledge had the courage to deal with. However, setting geology aside for botany, he will always see a sprig of olive leaf peeping from my waistcoat pocket, which I carry about ready for instant use. I have read his tit-bits on the *ologies* with too much pleasure to be cheated out of the chance of having the "great problem" solved.

So far, so good. Now for the "absurdity" to be found in my pamphlet. Hasn't every author (writer I mean) a right to a certain style if he can make one? If people throw Blue-books at my head, and so spoil my digestion, may I not take the liberty of dressing up an honest old fable, or a traditional morsel, to cast in return? St. Carolus Agnus forbid the interdiction! Did the "hat-and-pole absurdity" offend the *Bombay Times*, because he essayed a climb, and was "warned" of the danger of a fall? Or has your contemporary been over to the enemy's camp when in England, to make terms for himself when the battle of "separation" shall be fought? He has a dozen times, since resuming the editorial chair of the *Bombay Times*, argued in favour of what I advocate for "Koompanee Jehan" in my poor pamphlet! Yet because he sees a new pair of pinions essaying a short political flight, out comes his blunderbuss to wing me! But I wish I had not ventured on putting that spiteful question about going over to the enemy's camp. My "absurd" head often runs woolgathering on three or four subjects at once. For instance, just fancy any union between politics and Polly Peachem! Nevertheless, just at this period of discussion on the merits and demerits of "Crown" and "Company," I could fancy our friend singing—

"How happy could I be with either
Were t'other dear charmer away!"

However, I think it would have been just as well if the Editor of the *Bombay Times* had been courteous enough to have explained what he meant by "conceit, ignorance, and absurdity," instead of dipping his pen in critical gall, and then leaving his readers immersed in a state of open-mouthed hiatus.

Perhaps it was thought too daring of a low caste man like FIDELITAS to question the political wisdom of the Arch-Brahmin, late Editor of the *Friend of India*. Alas, I never worship king not kaiser unless he is of the true "guinea stamp." Strip him of the "we" that utters the Memnonian oracle, and FIDELITAS is ready with as fair a budget of useful world knowledge and guess politics *as the man within the head*. If I recollect aright my worthy old friend the Doctor said in 1846: "Our hopes are not sanguine of seeing a railway in operation beyond the Ghauts within the present century." Who would have listened to the Oracle if the ass under the Delphian skin had not prophesied better? Now I, an "ignorant" man, knew better, and always swore by a prediction the very reverse. I allotted five years before the iron horse would be racing into Poona; the Doctor *one hundred and eleven!*

That the Doctor will not forget the sprig of olive is really the sincere wish of

Bombay, 28th October 1857.

TOM CRINGLE.

P. S.—I *always* write in hours stolen from sleep, and that too after very hard daily labour. I only mention this to show that the above was written before I saw the review of my pamphlet in the *Bombay Gazette* of the 29th, 1857.

HOW SHALL DESTROYED CUTCHERIES BE REBUILT ?

SIR,—When all collective bodies of the mutineers shall have been crushed, attention will no doubt be given to rebuilding Collectorate Cutcheries, and it has occurred to me that in places without forts some plan may be adopted which would ensure the safe keeping of treasure, and even form places of refuge in times of danger.

To serve this purpose I would suggest a modified copy of the Martello towers on the coast of Kent. They are about fifty feet high, twenty-five diameter at the base, with walls about four feet thick at fourteen feet from the ground, at which height the first or living floor is situated. There are embrasures on this floor, but which only served the purpose of windows, to admit air and light, these might be retained and made closable by a musket-ball-proof iron shutter. The tower is entered from the outside by a moveable step-ladder capable of being raised by a rope and pulley. But I would improve on this by having chains leading from each side of the lower part of the ladder through pulleys built in the wall, and connected to a ponderous weight on the inside, which when detached from its sustaining catch, would sink down its well, and hurl in the air with the force of a catapult a whole ladderful of Pandies who might attempt an escalade. The ladder thus raised would shut up against the door entrance, whilst the door itself should be of bullet-proof wrought iron. The roof is reached by a winding inside stair from the floor described, and on the roof is a traversing platform for a gun, which in the Kentish Martello Tower is of a large calibre, but one of a much lighter description would serve the purpose here aimed at. A gun, I think, would be highly serviceable in case of any outbreak. Above the roof level is a parapet wall about five feet high, which might be crenelated in parts for musketry.

The lower, or ground floor, should contain iron water tanks fed by pipes leading inside from the roof. On this floor also would be kept the treasure chest of the Collectorate, together with a tierce or two of beef, and some biscuit in iron tanks, to enable its occupants to withstand a short siege. Its garrison force should be two pensioned Serjeants of well-established sober habits, and with the full or half pay of their rank in addition to their pensions. The office part of the Cutchery might be made to communicate with the tower by a covered way.

During the late disturbances the sepoy's walked into a bungalow as open to the winds as a Nabob's, and dipped their eager palms into the

Collectorate money-bags with the facility of a British Bank Director ; whereas the proposed treasure chest would be buried in its cavern, and except to the trusty few who would know of its whereabouts, would be an Arabian Night's myth to the outsiders.

Bombay, 9th September 1857.

TOM CRINGLE.

MECHANICS BUILDINGS.

SIR.—The European workman population of Bombay has lately increased, and is still increasing, at such a rate that it has become a question of grave importance how and where they are to be housed. House rent has increased full fifty per cent. over the rates of even three years ago, and notwithstanding this increase every house is occupied, and still the cry is for more, and the evil is that the cry is not responded to by builders. The building of houses for European tenants has hitherto been thrown nearly exclusively into the hands of natives, and the most of those who have invested money in house building have done so nearly exclusively for the accommodation of tenants with large incomes, by building huge expensive barns that would accommodate half a regiment, and have had attached to them large compounds, half jungle, half flower garden, which require the services of two or three men to keep them even in decent order. These large compounds are beginning to affect us by absorbing building ground, which is now absolutely required for the erection of additional house accommodation for our constantly increasing *permanent* European population, which arrives by each mail, and nearly by every ship. I say *permanent* to distinguish it from that *en route* European population incidental to one of the chief *entrepot*s of India, as Bombay undoubtedly is. The class of houses I have already alluded to are the immense unsightly piles which on all sides meet the offended eye. Luckily for my subject I knew Bombay in its large-house palmy state, when *rulers* only inhabited them, and as far as I could then judge, they formed a most sociable and hospitable community. All this has been changed by Manchester longcloths, by the elephantine march of commerce (which treads down all obstacles), by the opening of the overland route, and by steam-ship communication. Later times have brought us railroads, steam factories, steam-cotton presses, and cotton-spinning companies, which have ploughed through the Eden quiet of former days, and have literally not left us time to nurse a fever, unless it be the fever of excitement now so prevalent amongst every class of Her Majesty's European subjects in Bombay.

To return to our more immediate subject of house accommodation for Europeans, it is well known that the increase of machinery, and mechanical appliances generally, which have recently been introduced into Bombay, has also been accompanied by a more than equal increase in the European workman class to tend it and supply its wants. I will endeavour to give a rough list of this largely increasing class, and which I predict will still more rapidly increase above what I shall give, as it is a well-known fact to all heads of departments that the trained native mechanics of all trades have been absorbed by Government and other

large works, and their numbers being ruled by caste customs, can only be increased by an increase of the castes that severally furnish them.

This being the case, and the native labour market being thus inadequate to meet the demand, there has, as a natural consequence, been an inflow of European mechanic labour to fill up the deficiency. Many of these men come to Bombay on the chance speculation of employment, whilst others leave their ships for the purpose of seeking permanent service on shore, but the great bulk are specially engaged in England. There is little doubt of this immigration of mechanics increasing, as our native mechanic population were so nicely balanced to meet the work wants of Bombay before the time when railways were set going five years ago, that it has not yet had time to expand with the great expansion of commerce which has since taken place. The great demand for skilled native labour has raised its value in the market nearly fifty per cent. above the prices of 1852.

This increase of native wages' rate having in some measure assimilated itself to the wages of English mechanics, when allowance is made for the superior skill and knowledge of the latter, it is not surprising that Europeans should be employed in numbers never calculated on a few short years since, before the Great Indian Peninsula Railway had given the extraordinary impulse to trade and commerce, and had caused in itself, and indirectly in other quarters, such a vastly increased demand for every description of labour, whether skilled or manual.

Our European mechanics are employed, generally speaking, in two districts, viz.: one large group by the G. I. P. Railway and the P. and O. Company, both of which are within a mile of each other, and in each case a central spot near the top of Nesbit Lane, Mazagon, would only fairly bring them out of the dust and turmoil of their respective workshops. If I deal with this group I can then say and propose all that can apply to the still larger group more immediately employed by the Government in the Dockyard Factory, Dockyard, the Mint, Grand Arsenal, Commissariat, and Gun Carriage Manufactory at the southern end of the Island, besides large numbers employed in commercial operations generally.

The number of mechanics in Mazagon and Byculla is roughly arrived at as follows, viz. :—

	Men.
G. I. P. Railway—Locomotive Department ..	51
And shortly to arrive	20
Engineer Department	11
And shortly to arrive	13
Traffic Department	10
Secretary's and Store Department	6
	111
P. & O. Company—Permanent residents	34
Afloat (with families on shore)	35
Afloat (single men)	177
	357

If we deduct eleven from the railway for plate-layers employed out of Bombay, and take—say forty men of the 177 belonging to the P. & O. Company which serve afloat, but who may be fairly reckoned on to live on shore occasionally whilst their ships are in the harbour—we shall then have left a total of two hundred and eleven Europeans for whom to provide lodging, without reckoning children or families. In addition to these we have estimated, from an inspection of the Calendar, just published, for 1858, that there are 174 individuals confined by their business to Mazagon, Byculla, and Parell ; 392 individuals employed in the Dockyard, Mint, and other manufactories, the Preventive Service, clerks in public, merchants', and bank offices, &c. &c., confined by their work to the Fort and Colaba. There are also 150 individuals, mechanics and others, whose business is carried on in various localities, too remote from the site of either of the "clubs" for the latter to be made available, and on that account they have been kept distinct from the numbers already given. These may practically be called *present* numbers, but there is not the shadow of a doubt that they will be doubled in five years' time. It will be seen that I have not included numbers of Europeans employed by the more commercial part of the community, which would, I think, outnumber those I have given threefold. Those would all be sure and stedfast tenants.

Have any of our leading men who write of and rule our sanitary measures, asked where these men and their families find a lodging ? Do they know that they are driven into the health-sapping, life-destroying ground-floored houses of slimy-shored, fever and cholera-infected Mazagon ? Or if not there, then to small low tenements in the neighbourhood of the Bellasis and Grant Roads : of the latter especially, which locality, next to Mazagon, I consider to be the most destructive to European health in this island—a locality which, a few years ago, was the common dunghill of Bombay, and which is always reeking with foul malaria of the worst character. Educated (?) men who manage to live in the neighbourhood of these roads, do so either by the aid of iron constitutions, or by using time-serving corrective remedies. The residents of the Byculla Club-house prove nothing against this assertion, as the place is a mere caravanserai, the dwellers being here to-day and gone to-morrow. Besides, I should suppose that those who live at the Club all sleep above the level of the ground floors ; this would exempt them from the effects of malaria, except from local obstructions which might enable currents of night air to pile it up above its usual level.

But our European mechanics, even if fond of general reading, seldom dip into the pages of *Annesley*, where, in the opening chapters, they would read a lesson, which, if they were prudent men, would soon cause them to beat a retreat from the localities named. These men arrive in India full of gross (apparent) good health after a four months' idle lounging life on board ship, where, from want of that healthy exercise which former labour occupation had hitherto afforded, their system becomes languid, and whilst they accumulate fat, their bowels get inactive, and they land in Bombay like a charged shell, which any excess is nearly sure to explode in the shape of serious illness. After a few days' residence, the hot, moist climate of Bombay acting on a system gorged

with blood (often full of latent impurities), which, although exempt from sickness in a temperate climate, is here sure to be attacked, when living in a malaria-infected locality, with either liver complaint, dysentery, or fever, or perhaps a triune combination of all ; these either give our patient a six-foot tenancy at Sonapore, or if he fortunately recover, leave him with *disturbed* and lowered health. The duties he came out to perform prey on his mind (if a good man), and the thought that he is unable to discharge them either retards recovery, or prompts a return to them before the proper time, and thus is his health permanently lowered. But seldom does he think of running away from the enemy (malaria) which laid him low, and in many instances I am afraid he listens to some long-eared companion, who tells him that his sickness is all owing to his not having qualified his drinking water with brandy, or perhaps, without prompting, he thinks himself, that as brandy is only two shillings a bottle, he loses a most fortunate windfall by not availing himself of it. I could give dozens of instances of the fatal effects of brandy drinking in excess amongst working men, which have come within my own knowledge during the last few years. Thus, to malaria he has allied another foe ; the first in unseen ignorance, the last on the equally ignorant plea that "a man must have something to *support* him in this country." The writer of this letter confesses to a half wine-glass full of brandy occasionally, and he also confesses that having taken it (when not medicinally necessary) he has performed a very foolish action. It is the little *water-qualifying brandy-goes* which make the European set of India. If men would only consult *Liebig* in lieu of listening to great untruths, such as that brandy is necessary to *support* their strength in a climate like India, it would always be the care of every man who owns a sound stomach to reserve it to digest wholesome food in, not to make it a brandy bottle. Indigestion may be called the remorse of a guilty stomach, but there is indigestion of another character which may with greater truth be called the remorse of a drunken one.

They should respect their own knowledge and deductive reasoning, which all men are more or less gifted with, sooner than the maudlin opinions of their stupid, homicidal advisers.

Well, our man lives on in a low malaria-infected neighbourhood, he sleeps on a low level where he inhales the poison at every respiration of the lungs, and through every open pore of his sieve-like skin ; this goes on for a time more or less long ; his health, patched and mended till his sickness won't yield to the usual remedies, when he at last seeks the hospital or dispensary where medical men find that his system is in that low vitiated state, called cachexia. It should not be forgotten that men may be poisoned by fever-poison without even getting a pronounced attacked—slow-poisoned, in fact. Humanity demands, and self-interest sets its seal to it, that it will pay to build healthy dwellings for European mechanics in Bombay. Men strong in body and cheerful in mind will be more useful than sickly enervated beings, too languid to move without strained efforts. In this state their ailments will yield to treatment, as in a person of ordinary good health. A dose or two of quinine which ferrets a fever out of *Jones* or *Robinson*, who live in a healthy neighbourhood, is given to *Smith* for weeks in vain. The

reason is that between the disease and its cure a barrier is interposed in the shape of cachexia, as before stated. The flame of life is poisoned, as well as low or weak, is quite unable therefore to resist the blow of any strong disease ; and nature being thus cachectic, instead of siding with the doctor and his pills, is in unhappy alliance against him, and before drugs can exert a benign effect, the barrier *cause* must be removed.

The advice our patient gets from his doctor is the very sensible one of, " You must change your house ;" inasmuch as the nuisance can't be taken from *him*, the patient must be taken from the *nuisance*. Then comes the despairing thought, how is our poor European brother to do this, with an exhausted exchequer with house rent on the 'Tardeo range (where he should go to) at from Rs. 80 up to Rs. 180 ? There are no small tenements of moderate rent in healthy localities to suit his small means ; therefore, although sensible of the doctor's good counsel, the poor fellow is unable to follow it, and whilst he yet *hopes* to recover, he is pretty sure to die in the sink he should never have gone to live in. Perhaps a hard employer has cut off wages when brain and muscles had ceased to work for him. Sickness is bad enough in itself to bear up against when surrounded by loving friends at home ; but in this country, where the newly-arrived European has perhaps no kindly neighbours to comfort and sympathise with him as at home, his position is bad indeed. But what must be his fate when fell WANT comes with grim DEATH (scarce hid behind her tattered mantle), and with these formidable foes praying on a debilitated mind, he still has to support his pride of race amongst the natives around him ? The daily sunset brings his kind friend the doctor, who, if he could not save his life, has spared no pains in the effort, and that too without any expected fee or reward except that registered by Sterne's recording angel above. My European masters, bear with a gentle hand on your poorer countrymen when sick ! succour and guide them with good advice on their first entrance into Indian life, and when they are fever-stricken, don't forsake them ! Kindness at this period of helplessness will cause the muscles to move with greater rapidity to wipe out the score of gratitude when health restores vigour to his frame.

Now, as no small tenements have been built in healthy neighbourhoods to suit the pocket of the English workman ; as he cannot individually work out of the fever latitudes without house accommodation ; as he is an expensive machine for which we have paid a large sum (Rs. 600) to bring him through a distance of 14,000 miles to this country ; and as in most cases our machine, if he gets sick, still has to be paid for work which he is unable to do, because you, his employer, who as an educated man, failed to give him the necessary advice how to preserve his health, and also failed in not building, by the combined might of capital, such *Mechanics' Clubs* as shall lift the humbler members of your race to a higher standing of respectability, shall preserve their health to your use, shall enable them to pay you 12 per cent. for the building-capital you invest, and shall rescue them from low associations and low vices, contracted as they always are in low malaria-infected neighbourhoods. My plan for a *Mechanics' Club* is that a site be sought somewhere near the top of Nesbit Lane, on which to build a

quadrangular pile, something on the plan of the Suez hotel (without its dirt), with one large entrance gate kept by an European pensioner-porter. The building to be two stories above the ground-floor, and to have a large airy space in the centre, which a block one hundred feet square would give. The faces of the building would be each thirty feet deep, and this depth being divided by a longitudinal wall throughout would give a front and back room as a *suite* of apartments. Each of the rooms would thus be fifteen feet long, their breadth twelve feet, and height about thirteen feet. The centre partition to be arched and provided with sliding doors to throw back, so as either night or day to admit a thorough current of air through both rooms. The ground floor would contain the dining hall, lecture, model, and coffee rooms. In the centre of the courtyard would be an octagon building, in the exterior circumference of which would be the bathrooms, whilst in a circle within these would be the grand kitchen, which would be lighted from above, and fed with fresh air from below. The fires of the kitchen would heat the bath water without expense, and which bath water would be made conducive to keep the drains of the kitchen in a clean and wholesome condition, and not remain as fever traps, as they are to nearly every house on the island.

Among the most important points which have been attended to in the design are the provision of an ample supply of *air* and of *light*, two elements of human consumption which are now-a-days admitted to be essential to *health* and even to *life*.

Ventilation is provided for by giving each *suite* of apartments (although forming parts of a general block of building) *two frontages*, if the term may be admitted, or rather a back and front both open to the external atmosphere, and both amply shaded by protective verandahs, covering galleries, or corridors, one of which will serve as a passage to the several front apartments of the range, while the other is secluded for the private use of each *suite*. To assist the ventilation it may be also mentioned that the construction of the building throughout will admit of any details for atmospheric circulation which may be considered most suitable.

The fire-proof principle will be sedulously provided throughout the entire structure. Stone and iron material will be used in all practicable cases, so that any accidental or wanton conflagration would be confined to the apartment in which it originated, and would be prevented communicating through either its roof, walls, or floor.

The floor of each range of rooms forming the ceiling of that beneath will be of the most substantial character, perfectly sound-proof and vermin-proof; a cool and fine chunam surface will be presented to the feet, and rats will find no snuggeries for establishing their noisome and disgusting communications.

All the walls and ceilings, being solid, may be painted and decorated in a pleasing and permanent style, and the interior of each room may be rendered very attractive when pre-arranged, without approaching the character of costliness.

Abundance of pure water will be supplied on each floor, so that the itinerant bheesty will have no roving commission to range, as at present, undisturbed and unchallenged through the private apartments of the residents, each one of whom will be secured a similar safety from intrusion to that provided in the "castle" of "every Englishman."

For the disposal of excrementitious matter proper self-acting discharge pipes with water traps will be provided, so that pure air shall be preserved throughout every nook and corner of the edifice, while the convenience of handy and private closets will be at the command of every inhabitant.

The general arrangements of baths, and of public kitchens, &c. will be arranged as I have already roughly indicated, and for the convenience of all parties hot and cold baths will be always available, and the apparatus contrived so as to reduce the labour to mere superintendence.

The flat roofs of the buildings will secure the best kind of covering to the upper apartments, and splendid terraces for the use and enjoyment of the residents. Let us fancy a lateral pink screen round this terrace when lighted up and converted to the service of the Mechanics Bachelors' Annual Ball, at which all the fair spinsters in Bombay would be armed like Dianas : but with Cupid to lead them to the attack of obdurate hearts ! These balls could only be permitted annually—the mischief being too *heart*-rending to be often repeated.

These flat roofs will at the same time facilitate the rapid collection of every drop of rain water that falls over the building, without remaining in saturated tiles, overloading the structure of the roof. Moreover, no injury could be done by the black gentry who now hide their edible treasures at our expense by untiling the roofs of our bungalows, and render day hideous with their aggravating caw cawing, and early night awful when settling their drunken disputes about bones filched from each other during our meal-times.

Last, not least, the appearance of the pile of buildings generally will be such as to please the eye, and betoken the spirit of improvement which has suggested the creation of the edifice, and pervaded its every detail. Substantial in its interior construction, yet light and graceful in its external features, the "*Mechanics' Club*" shall rise like an architectural modern beauty amidst the ancient ugliness of Bombay buildings, and the aristocracy of rupees shall gather beautiful (at the same time economical) hints for improving the aspect of its own rotten old structures. Colaba should possess another such Mechanics' Club for the group at the south end of the island.

But I am most anxious that my readers shall not run away with the idea that because the building I have described is handsome, it is to be necessarily costly. So far from this being the case, I hope to give each resident his *suite* of rooms at somewhere about Rs. 20 or Rs. 25, and at the same time give the "*Bombay Building Society*" a most satisfactory dividend. With rents at the present prohibitory prices, the time for a House Building Society to arise to its work has not only come, but its advent is imperatively demanded. And if we can only keep out patriotic fellow-townsmen, who have snug little plots of unsuitable

ground to be disposed of at *cooked* prices, I predicate that our Bombay Building Society will do well, and they will merit the hearty respect and good will of every European on the island of Bombay. There is an ample field for their labours. I could fill a sheet of paper with the names of large and most important works they could engage in to-morrow, were they in existence. From the date they commence their labours Calcutta will cease to bear the exclusive title of "City of Palaces."

I will now proceed to point out a few of the many benefits mechanics would derive from being thus united in a large building together.

They would obtain cheap, constant, and first-rate medical attendance.

All the trades which supplied their wants would give them of the best for fear of losing their large custom.

They would buy their beer by the score of casks, and bottle for their mess at half the price per dozen they now pay.

If a shigram and horse were desirable, three or four would form a joint-stock company and become proprietors at once. The *coffee* room would be provided with all the newspapers and a few of the best monthly periodicals. I would not advise them to form a library, as there is a very good one at the Mechanics' Institution. Besides, it is better that their class should unite their strength for one good library, than by dividing to have two indifferent ones.

In such a building our mechanics would enjoy good health, and as they are nearly all, more or less, selected in England for their sobriety, and superior knowledge in their several handicrafts, there would be such a preponderance of good example to lecture and advise *vice* not to *run off rails of virtue and sobriety*, that a great deal of an improving character may be reasonably expected from our *Bombay Mechanics' Club*.

The benefits this club system would confer on employers are scarcely to be calculated. Let me draw one brief picture. An engine-driver in a poor sickly condition goes out with a heavy train to Campoolee. This man shall have burnt as much costly coke, and caused as much costly damage to his engine, though perhaps the latter may not be seen at the time, as would pay his rent for three months at the club, from sheer debility and want of energy (which health always gives) to perform his duties in an efficient and economical manner.

What is the result of bringing five mechanics out of ten to Bombay ? I will endeavour to lay this important part of my subject before my readers, and to it I beg to draw their particular attention.

A mechanic is engaged on what, both himself and employer in London, think quite a princely salary ; so good is the fortunate engagement thought of by husband and wife, that it lessens the pangs of separation by the bright vision afforded of accumulative gains in a comparatively short period. The husband leaves his wife say a guinea a week to keep house, whilst he is to keep the *accumulative purse* in India. On his arrival he finds that he has to live several days at expensive hotels before he can ferret out some unhealthy crib of a house, for which he

has to pay Rs. 30 per month. His mind immediately reverts to the pretty cottage at home containing pretty Mary, for which he paid only £6 or £7 per annum, whilst here, in this land strewn with diamonds, he has to pay £36 per annum, for a fever-stricken house without pretty Mary. Our bewildered mechanic has then to furnish his house at a considerable cost. Then he has to get a cook, and probably a three rupee boy as a maid of all work. Then come the dhoby, the bheesty, and sweeper. If our man has been accustomed to his glass of beer at home, who will deny it to his wrought muscles here! But he must pay *ten or eleven shillings* for twenty-four poor tumblers full, which, as they each pass in daily succession over his thirsty palate, remind him of the lusty home pewter quart, which he could enjoy for 4d. After his many monthly disbursements, which most probably included a—to him by no means light—medical fee, our man begins to doubt the wisdom after all of having left poor Mary to come to make his fortune in India. He mentally admits having been paid all that he reckoned on receiving, but somehow or other he had to pay it all away again to people who did not appear to earn it in the earnest, complete, Anglo-Saxon manner with which he himself works. A little sickness follows; the hot weather, and prickle heat and all other heats also follow. Our man begins to get passionate, swears like a Claverhouse dragoon, then fairly takes to the bottle, gets reckless, indolently indifferent as to the performance of his duties. This brings reproof, which is met by defiant insolence; he goes on a little longer from bad to worse, until his Indian employer is glad to get rid of him at any price, after he has cost no end of money, time, and patience, which, for all the good it has wrought, might have been cast into the sea. Nay, worse by far—our man struggles home in a woeful plight to Mary (who looks equally woeful from long suspended funds), gets into his old employment again, and preaches a crusade ever after against Indian employment, with all the zeal, and (from long practice) fervid eloquence of *Peter the Hermit*. Just let us fancy what a dozen men of this stamp may do of harm in dissuading men from accepting Indian employment! And yet the wages given may have been, nay are, most liberal, but if man receives ten shillings a day, and has to pay a "*Diggings*" price for food and lodging out of it, he thinks he had far better have his five shillings in England, where civilisation has so nicely balanced the necessities of life to wages' rates, that no murmur is heard.

The P. and O. Company and the Railway Company, to a certain extent, have to pay house-rent for certain of the men they employ; surely they would see the advantage to themselves in taking a lead with a view to establish some such a club system as I have indicated. I do not ask charity for mechanics, for they would not accept it; all that is wanted is capital to build them dwellings where they could live economically, healthily, and consequently cheerfully. And that this capital would yield a fair return in the shape of rent I am so fully persuaded, that I have made an allotment of a large portion of my bank balance to invest in the shares of the *Bombay Mechanics' Building Company*, whenever they shall feel disposed to appear in that tangible shape which we all like to witness when we loosen our purse-strings.

We have amongst us an architect who has had many years' experience in drawing plans and estimating for the very description of building I have recommended. My donation of Rs. 10 is also ready towards a fund for paying to have the scheme put in a workmanlike shape on paper, so that we can all see the sort of fence we have to leap at. All I ask for is to let us do *something* to show, that besides the great number of our societies associated with the sciences, we can bring down our heads from the clouds to civilise man, a step which must always precede even religion itself—that is, religion having an elevated faith and a humanising character.

I have taken the liberty of placing in your office for inspection a sketch of the building here proposed to the *public spirit of Bombay*.*

Bombay, 31st December 1857.

TOM CRINGLE.

A FANCY SKETCH.

THE BACK BAY CRESCENT AND PROMENADE BUILDING COMPANY,
LIMITED.

Capital, 50 Lacs. In Shares of Rs. 50 each.

SIR,—The purpose of this Company, which has already secured high sanction, is to obtain from Government on easy terms the marginal sweep of Back Bay, extending from within 100 yards of the firewood stacks to opposite the Church Gate, with a depth of 50 yards back from high-water mark, and a like distance seaward. A sea wall will then be built along the whole frontage at 50 yards seaward from high water mark, with semicircular towers, having a radius of 50 feet, at every 200 yards. These towers will only have a three feet parapet wall, the same as the intervening portion of the sea wall.

In the central portion of each tower there will be a fountain fed from the Vehar Lake, filled with choice aquatic plants. The outer sweep of the towers to be provided with seats for promenaders. A distance of 100 feet from the sea wall will be planted with the finest umbrageous trees as a continued promenade, the whole length of the crescent frontage. Immediately in front of the houses, about one hundred in number, will be a railed off space, with tastefully laid out garden plots of 30 feet frontage to ensure privacy. There will also be a railed off carriage road of 40 feet at the back of the Crescent, looking on to the Esplanade.

The details given include a defensive scheme, should Bombay ever be disturbed by an enemy, in the event of which deep trenches will be cut on the Esplanade, or back of the Crescent, the soil from which would form earthen batteries around the semi-circumference of the sea wall towers. The roofs of the houses being flat, and the parapets machiolated, would form good cover for rifle practice on the enemy.

* A Company was started on this suggestion, and has been in successful working operation nearly three years.

The ground floors of the houses will be raised on arches 10 feet from the ground level, the arched portion to form the cook-room, pantry, and other domestic offices. Horses and carriages will be furnished with brick mews away from the crescent. In order to mask the proximity of the domestic offices, an upcast chimney, of an ornamental character, will effectually draw to itself all smoke, and effluvia of every kind. This is effected by not giving any other upper ventilation, and by affording full ingress of fresh air below. Internal ventilation of the mansions will be provided for on the most approved and scientific principles, and perfect success guaranteed. To prevent all glare, and excess of light, broad verandahs will be provided, with folding trellis screens of galvanized iron netting, the lower part having troughs containing mould for creepers, the whole mounted on large castors or traversing balls, so that a child even may throw back the living sun screen, and open an uninterrupted view of Back Bay.

The Crescent will be broken into large blocks, so as to leave at intervals roadways fifty feet wide, to give access to the promenade in front. Water will be laid on in all the houses and an impalpable shower may be made (by means of the new gauze jet) to play on the roofs during the whole day, rendering the house delightfully cool.

The houses in the proposed Crescent must be eagerly sought after as residences by the upper class Europeans of Bombay, offering, as they will, close proximity to the Esplanade and Bandstand, the Victoria Gardens, business offices, &c. It is not intended to go further into details, which are all worked out, until public opinion has been elicited through the press as to the favour this grand and highly remunerative scheme would obtain. Any one taking an interest in it as herein shadowed forth can address "Projector," *Bombay Times* and *Standard* Office.

Bombay, 7th June, 1860.

TOM CRINGLE.

HOTELS.

SIR,—The past three days here have been fine weather for young ducks and drill corporals,—which means wet and sloppy. All the roads are slushy and cut up. The bund waterfall is much visited by strangers as it now forms a grand sight with its large volume of water tumbling over the bevilled slope of the bund, so as to give one the idea of a huge cylinder revolving on its axis from shore to shore.

Visitors from Bombay will be glad to learn that we at last have what we have never had before in Poonah, or Bombay either—a really clean, well-conducted hotel, started by Mr. Dorabjee Sorabjee, before-time Head Messman of the 8th Hussars, and H. M. 57th Regiment of Foot. It is called the "Royal Family Hotel," and is exactly opposite, and close to, the Poonah Railway Station entrance gates. The plan of the Hotel is admirable. In front is the usual carriage portico, behind which is a promenade verandah extending from end to end of the building; next the verandah is the entresol, admirably adapted either as a display

tableland for the *omnium gatherum* of boxwallas, as a vantage ground to resist the extortionate demands of a hired phaetonwalla, or to enjoy the quiet luxury of a fragrant cigar—with accompaniments. From the entresol we step into a handsome public drawing-room, 50 by 30, with ceiling twenty-two feet high. From this centre room branch off right and left, the private apartments; and being *en suite*, are as retired and commodious as in one's own residence. There are large, well-arranged bathrooms pertaining to each suit of rooms, and as the bath water is supplied exteriorly through a pipe, none but the domestic servants of the hotel have access near the bedrooms, thus ensuring the safety of property. All the bedrooms are of the height quoted, twenty-two feet, and are thus cool and healthy. In fact it is just the model hotel which W. S. Sebright Green ought to see and live in for a week, before he exercises his creative genius on his projected hotel in Bombay. But the chief feature of the place is the landlord—I use the term from the *bonifacian* point of view, he being the *beau idéal* of the good old type who receives the tired guest at the threshold, and after feeding him like an alderman (by the by, Dorabjee is of the true aldermanic build himself), sees him depart with a “God be with you, fair Sir,” which is truly refreshing. A friend of mine staying at the hotel told me that one of the Society of Friends lately inquired there for accommodation, remarking that the heat of Bombay had caused him to “flee” from that moist city, when poor Dorabjee, thinking that the word “flee” had reference to *F sharps* in his bedrooms, fainted away outright! My friend is a great joker and this may not have happened, but I can truly say that the Royal Family Hotel has the cleanliness of a Dutch best room; the public comfort of an inn; with the privacy of one's own domestic dwelling. The table is well and profusely served with all the “delicacies of the season,” not forgetting Bologna sausages!

Strangers are delighted at the present cool temperature of Poonah. Whilst you are groaning under 85° we rejoice in 73°; and when the showers hold up we can pedestrianize in midday from Dan to Beer-Sheba (if those Biblical cities could be compressed within our geographical limits), without fear of *coup-de-soleil*, or not realizing a most voracious appetite. You Ducklanders who have been growling over falling viaducts and defective culverts, if you come up the Bhore Ghaut let your palkee be set down under the boldly-perched viaduct of the reversing Station on the Bhore Ghaut Incline, near the Toll-Bar. Here you will, indeed, see work which is to last till the lock of old Father Time himself turns grey. This work is of dressed rubble coursing, but in place of the stones being small and thus wanting in binding capacity, the whole is built of cyclopean blocks, worthy of the work and the Contractors—Messrs. Adamson and Clowser, of whose work on the Incline this is only a sample. Had the Government sanctioned the design of the former gentlemen for this viaduct, it would have formed one of the noblest sights in India. This design, as far as I recollect, was to have shown castellated towers on the flanks of the deeply cut pass through which the ghaut cart road passes, and over which the viaduct spans, thus giving it the appearance of a castle keep, such as we see in old Norman strongholds. A magnificent view can be had of this viaduct

from the railway on approaching Campoolee. If Trajan, the great Master Stone Mason of old Rome, could plaster his ashes together as in life and visit this noble work, he would not hesitate to set his seal of approval on such a massive yet lofty structure, rivalling some of his grand old yet-existing aqueducts, which after-generations, with shameful neglect, have allowed to fall into decay or the hands of the spoiler.

Good-by, the sun has just peeped out, the sky is clear and bright to windward, my walking stick is ordered, and I am off to the Post Office to ask why they sent word at 8-30 P.M. by my messenger "that I could not have my newspaper then, but must wait till this morning for it!" Shall Jove's thunder sleep when such abuses exist? Get a bolt ready! it is not the first time in my experience.

By the by, talking of newspapers, the Royal Family Hotel takes in both the Bombay and Poona newspapers, which is a great comfort to the Bombay sojourners therein, as it is no joke to be cut off by a few puffs of the locomotive, from the daily pabulum of Bombay news which the indispensable *Times of India* daily furnishes to its thousands of expectant readers.

But why in the name of common sense and free trade is not the *Times of India* available to would-be purchasers in Poona? Is there a nook in broad and merry England but what your namesake is to be found and purchaseable for the current coin of the realm? No. And shall it be said that you cannot extend the influence of your presence to a city 112 miles distant to which two trains run daily? For shame, be up and doing; let strangers know where they can send and get a copy of your paper without being told as at the Post Office—"Mr. Brown, can't you, can't you, call again to-morrow?"

There are many sensible men who order the *Times of India* to be sent to them here by post; all very orderly and proper, but are you to have no bowels of compassion for the unthinking but generous wight, who is so busily engaged on the eve of departure, kissing "dear Emma" and the children, as to be quite oblivious of the Englishman's manual—his newspaper? It is for these waifs of society I plead, and if you don't respond to my suggestion I shall write to say "Stop my Paper," and "never more be (Editor) of mine."

Poona, 20th August 1860.

TOM CRINGLE.

ON THE CONVERSION OF TIMBER FOR BUILDING, HOUSE FURNITURE, AND OTHER USEFUL PURPOSES.

SIR.—The great scarcity of mechanical labour to supply the various trades of Bombay, is admitted by all those who have made themselves acquainted with this important subject.

The wages of native mechanics have now reached their maximum intrinsic value for the labour done, there is no competition amongst

themselves, as their collective working power has reached its culminating point. Owing to caste customs it has no power to expand with any chance of keeping pace with our expanding wants. A boy carpenter to whom, two years ago, I refused a monthly wage of Rs. 12, is now a native foreman in a large factory at Rs. 30.

This state of the labour market must tend to encourage European mechanics to settle in Bombay, whenever opportunity may bring them to our shores. Within the last few months large numbers have taken employment ashore, who three years ago would have starved for want of employment, owing to native mechanic competition at lower intrinsic-value wages. This state of labour has now ceased to operate, because native labour has reached its remunerative value point.

I will here pay a tribute of praise to the native mechanic which few will refuse to deny him, by saying that he is docile and intelligent, and sticks to his work with as much steadfastness as man can well do in an exhausting climate like India. His drawback as a mechanic is a want of correctness, not so much in preparing his work, as in *fitting* it together. This blemish will disappear when nearly every native mechanic in our large factories will be surrounded by Europeans working by their side, with that fixed and settled order of handling their tools, measuring, and gauging their work with such skillful nicety, as to ensure neat and accurately finished work. This is what the native mechanic has yet to learn, and to enable him to learn it quicker than he otherwise will do, a deal of rubbish, which he calls tools, must be turned out of his basket, and substituted by accurate tools, by which only can accurate work be obtained.

But these are merely trivial sins of training. Employers are loud in their complaints as to what they call the ingratitude of mechanics, inasmuch that if offered higher wages elsewhere they will leave their old employer to better their condition with another. When it is considered that nearly all European *masters* in India have done for themselves what they now condemn in the native, the complaint is not only unjust, but is simply ridiculous, and shows a want of knowledge of the laws which regulate the labour of man. I like to see labour rising in value, even if it raise its insatiate cry monthly, for nothing is more certain than where labour rates increase, there do the twin sisters INDUSTRY and COMMERCE take up their abode. Woe! woe! to the nation that has a *falling labour rate of wages*. In the year 1848 wages were about half their present rates, but our commerce has also *doubled itself since then*. Generally speaking, man can only consume his daily modicum of bread and cheese, in whatever position of life he may attain to. After purchasing these supplies he spends the remainder of his wages (or income) in some manner conducive to trade,—he wears finer clothes, builds a house, rides on the railway, sets up his carriage, or perhaps opens up some new branch of trade himself, thus high wages always come back in some shape or other to those who gave them; the money paid to mechanics' muscles especially, quickly returns to the giver in another shape, and is used over and over again, like water in a parlour fountain. But if money be used in large concentrated sums to influence commercial transactions in a monopolising or restrictive manner, or if power hoard it for purposes of self aggrandisement or oppression, it then becomes the curse we often

see in the native Rajah, when he plants his suicidal iron heel of avarice on the neck of commerce ; it is then we see labour sitting in listless despair, because she cannot make progress towards a bettered position. We see traces of this even now in the natives around us, who will often refuse good remunerative pay for labour, as if old tradition was still ringing a doubt in their credulous ears that "the iron heel" would rest it from him, as of old, as soon as earned. The potato failure in Ireland, during a succession of years, has been the salvation of her. The landlords, who lived on potato rents, became bankrupt with the "blight," and were swept away by the Encumbered Estates Act, and replaced by men enlightened by the civilization always attendant on commerce, and Ireland is now raising herself from the dust where the potato eater has become the bread consumer, and now that her wages' rate has been changed from *four pence to fifteen pence* per day.

It will be found a futile task to endeavour to bind labour to a fixed rate of wages for the behoof of special employers, as it will always seek the highest bidder till it has found its value level. When labour demands higher wages, the falling barometer does not more surely indicate the coming storm than that such a demand is the result of commercial activity. The only way to reduce excessive demand for wages is to *train* labour, and thus cheapen it by competition. Those who glory in the onward progress of man will never attempt the SISYPHUS task of crying to reduce wages below their market value level. When employers allow a good servant to leave them on a wage question, they will find they will have to pay as high a rate to the man who replaces him as the other asked, besides losing a man trained to their special work. I would here impress on all those who employ native mechanics, not to sit down wailing and weeping for the workmen who have left them to obtain higher wages elsewhere, but to be up and assist in training native youth, every employer according to his ability. Three years' persistence in this policy will inevitably cheapen labour.

I have stepped aside from my special subject to venture these few remarks on labour value and mechanical training, because I think the opinions I have combatted are entertained by many employers whose views can never be realised, and by acting on them they impose immense difficulties on those who have to stand between the employers and the employed.

Our trade wants having outgrown the mechanic labour supply, and as our chief industrial art is exerted on wood, I think the time has arrived when a saw mill would succeed in giving an increased impulse to our chief wants.

We may be told that a saw mill was once established at Mazagon. This one I have seen. It was a mere log mill with insufficient power, and the machinery so badly fitted up, that when at work the vibration was such as to endanger the building. Then again the saws did not appear adapted for cutting some of our timber, which, in peculiar sorts, possesses excessive hardness, in others a woolly toughness, and worse than either, blackwood for instance, is so full of essential oil, and what

'ny call *gritty* matter, as to smoke under tools like a fired wheel-nave.

To cut timber like these with ordinary fine frame saws was not to be expected. It has occurred to me that slight adjusting frames might be made, having a cool lubricant on sponges or short brushes in contact with machine saws when cutting timber which is difficult to get through. Khair wood is very hard, and is so difficult to bore, that a metal drill and long depressing lever are used for boring chair pin-holes by hand. I well recollect seeing the pin-holes bored when the contractor was laying the Tannah line with Khair sleepers, just opposite the coke ovens at Sion, and being told that he paid as much for boring one pin-hole by the carpenter's drill as he received per yard forward for laying the line. Our future millowner need not be alarmed at this, as Khair is seldom used except for fencing, and is never seen in timber of any size, and there is little doubt that with ample power and lubricants, quick tools will cut any timber.

The remarks I have as yet made are merely preliminary to the main object I would wish to advocate, which is to induce some of our English capitalists to form a Joint Stock Company to establish a complete timber converting manufactory in Bombay. There is no country in the world that more needs one than this. In hot climates our houses are all roofs, doors, and windows. Any one can judge of the facility with which such a manufactory would turn out its hundreds of thousands of venetian leaves and sunblinds. Our coachbuilders would send their orders for thousands of wheels, spokes, felloes, and navies, which would be manufactured by machinery with such matchless nicety, that it would be absolutely impossible to tell one of each description from another. The same would be the result with other portions of the carriage builders' work : patterns would be sent to the mill with an order for specified work, and the parts would receive such a finish as would leave the builder little more to do than join the pieces together, give them their three coats of varnish, and then to roll home to their customers a finished carriage.

That this is no fancy picture, let any one stand beside a "sweep" saw, and observe the beautiful manner with which it cuts out the design drawn on the wood. Then observe the "moulding" machine, which brings out the most graceful curves from the common pieces of timber it is fed on. Need we say this is wanted, when we look up at our ceilings, and observe the miserable affair your favourite carpenter Govind made for you, and in which he took such pride? The moulding machine would abase his pride and purify his taste in its own renovating and elegant manner, not only for ceilings but for decorating anything a committee of taste and elegance could desire.

Let any one place in the tell-tale light the most finished table to be procured in Bombay, and he shall see the defacing plane-marks on it. Our "planing" machine will smooth over these unsightly surfaces, and on your visit to the manufactory you will be presented with a garland of party-colored shavings each fifty feet long! If this is not a test of true work, where shall we find it?

Observe our native carpenters toiling over flooring-boards, one by one, as a sloth eats leaves from a tree, whilst there are machines in England which we want to see here, that would seize on a log of timber, cut it

up into planks of a given thickness and breadth, and then plane, groove, and tongue them with such marvellous exactness, that considerable care is required to keep the parts from uniting before their time.

Let us consider with what beautiful exactness we could have our doors, windows, sash-frames, and especially venetians, if made by machinery? The venetians at present in use seldom last a week without repair, owing to their not working in unison with each other. But all this would be changed as if by enchantment with life-like machinery, which would turn out the pieces so much alike, that you might pluck them indiscriminately from a bag, and drop them into the parts they are intended to pair with.

The climax has now been reached in wood machinery by the late invention of a machine for dovetailing. It only required this finishing stroke of man's genius to enable the trade to flood the world with "boxes"—that hydra-headed English synonyme puzzle to Frenchmen. Let opium exporters rejoice now that the time is not far distant when our manufactories will make for them packing cases faster than they can fill them, and of such a finish, that after having fulfilled the duties of opium cases, they may be placed on rockers, and sold as "morphean cradles" for the young celestials.

In our hot season we should see on the Esplanade, not ugly cadjan and bamboo houses and messrooms, but elegant wooden houses mounted on stout bases; and if needed, mounted on broad wheels so as to enable their occupants to haul off from a neighbouring house on fire, or to take a trip for change of air when ordered by the doctor. These houses would be made so alike in their several parts as to render it unnecessary even to number them:—thus, a respectable-sized house could be put together in a period of time little longer than pitching a tent would require. A new arrival would hire a wooden bungalow in lieu of a combustible cotton tent. If a gentleman in the Mofussil had to put up in a part of the country where his permanent stay were uncertain, he would send an order for a wooden house to be sent off by rail on the following day, together with a few carpenters to guide its several parts together.

It may be thought I am creating imaginary custom for my manufactory which could never be realised, but I have little doubt that had such a manufactory been in existence, several large contracts might have fallen to their share (at least the principal part of them), as during the last year the Government wanted a large number of carts for the conveyance of the sick, and convalescent of their armies, as well also of a large number of carts for forwarding soldiers and stores up the Indore road from this presidency. We can all form a just opinion as to what a short time it would have taken to have turned these out of hand, in conjunction with an engine-fitting and forging establishment recommended in a previous letter. Bombay however being poverty-stricken in manufacturing capability, the Government had to go without its carts, and the manufacturer without his profits.

I may safely say that our three Western India railways would be glad to give such an establishment an aggregate order for one thousand

railway waggons (the iron work being imported from England) were it now at work. The G. I. P. Railway could now give its order for one or two hundred waggons; not that they are incapable of making their own stock—a visit to their carriage-building establishment, there to see the beautiful and strong work turned out, would soon dispel such an idea—but they have not time to build stock so fast as the traffic manager can fill it. Then there are besides, occasional ships to fit up for conveying horses, ships' cabins to fit, railway chair keys to make out of small offal wood, ammunition boxes by the thousand, one hundred sixty-ton new cargo boats, dozens of new railway stations, and no end of railway fencing. I do not say that my much-needed manufactory would *make* all I have pointed out,—its chief usefulness would be to *prepare* the wood by sawing, planing, tenoning, morticing, grooving, tonguing, moulding, &c. for other trades to put together; in these operations it would do wonders, and enable us to go ahead in other matters.

It grieves me to see those who call themselves sensible men of business—men made of gold—playing ducks and drakes with their money across the broad Atlantic, when down comes a steam-hammer crash, worked by two or three old boobies with spectacles on nose, *sans* sense, but having a money-making instinct; these *will* a panic, and a panic comes, in what is called the money market, although not a note or coin is withdrawn from circulation; a crash, whilst tons of gold are being exhumed from its matrix bed; a crash, whilst all the world are singing peans of joy for God's bountiful harvests over all the countries on the earth. Had some of the ruined ones embarked their capital in feeding the mechanical wants of our colonies in lieu of glutting American markets, what a different story they might have had to tell! What a comfortable reflection it would have been to find themselves on the winning side of their ledgers, in lieu of lying prostrate with scorched wings, from buzzing too ventuously in the *ignis fatuus* torch of mammon!

I have on one or two other occasions suggested the introduction of machinery into this island, and I always shall think that such invitations carry more force when accompanied by a description of some site whereon the factory called for may be built to the best advantage. I will do so on this occasion.

A person going along the road which connects Mahim with Sion, will find, just east of the village of Daravee, that the shore bordering the Sion Water juts out into a tongue, owing to a North and South reef which spans from shore to shore. On this tongue is a ruined tower, which has the appearance of having once been a windmill. Subsequent inquiry has since confirmed this view, as I learn that a windmill was once worked there for expressing cocoa-nut oil. As few places enjoy steadier winds than is common on the shores of this water, wind power might be made a valuable auxiliary for working light turning-lathe gear, &c. &c., be this for those concerned to determine. It is at this spot I would establish my timber-converting manufactory, for the following advantages to be derived from the site:—

1. The land belongs to the Government which would gladly welcome useful capitalists to our shores, by either making a grant of this land,

or by selling it on very advantageous terms to the manufacturer,—its intrinsic value for other purposes being very low.

2. Ships freighted with timber from the north or south coast, from Ceylon (what is Ceylon doing with her spare forests which are situated on the banks of rivers, when Indian railways want two millions of sleepers, and a hundred and fifty ships are idling in our harbour with freights at a low ebb?) or Moulmein, could anchor with the greatest safety off Mahim Bay, and discharge it by rafts to the shore, worked by the half-employed Mahim fishermen, who would take the rafts through the arches of the Causeway up to the very mill "timber slips," which would be laid down into the water. The rise and fall of tide is only from 20 to 24 inches. I need scarce say that this plan would save the millowner thousands of rupees annually for land carriage were he less favorably located. I should have mentioned that the large native Buttelas would come into the bay and discharge timber on the beach, from whence it could be rafted as before described. The writer of this superintended the rafting of about 70,000 sleepers in the same manner for the Tannah line of railway.

3. There is little doubt but that the Kotree coal measures on the banks of the Indus will give rise to the importation of coals into Bombay, &c. These also can be waterborne to the mill-door.

4. The mill workmen would be in the most cool and healthy spot on the island, and there being no lack of building ground in the neighbourhood, they would live cool and healthy, away from the city contaminations, besides being on the spot in case of fire, and with the sea at their very elbow to extinguish it, should any take place.

5. Building materials, such as lime, bricks, tiles, &c. are largely imported from along the north coast; these also could be waterborne to the site,—but there is abundance of capital building stone on the very site itself, which, when levelled, would admit of the machinery being planted on the living rock, thereby saving the cost of foundation blocks of stone, which always figure as an expensive item. In order to illustrate this, I may mention that a company in Bombay have actually imported foundation blocks of stone from England for their machinery, on account of its being cheaper to do so than pay the heavy prices demanded in Bombay. This is solely owing to the want of a few yards of contractors' rails and a quarry crane. It will be admitted from this fact that the old saying of "carrying coals to Newcastle" is not a dead figure of speech. If any one should wish it, I will also inform him that the British or Crown Government, which the Calcutta separatists are crying for, have also in their wisdom sent shiploads of English granite with which to build the Bass Lighthouse, *because I suppose there was no building stone in trap-formed Ceylon!*

Let us return to our saw-mill. When it had turned out its hundred waggons for any of the railways in India, they might be run on to the coke ovens' siding at Sion, four hundred yards distant from the mill, and sent to their destination. So in like manner may all its finished work be sent by rail whenever it may be required, whether to Calcutta (in a few years hence) or to the banks of the Indus.

All that our millowner would require in the city of Bombay would be a small office at which to receive orders.

It may probably be of service to some of our enterprising merchants, whether English or Native, if I give the prices and other particulars of the machinery connected with this beautiful branch of our industrial arts. Only to see some of these splendid machines at their life-like work is enough to lift man's thoughts to God, inasmuch as He has gifted us with the reason and skill thus to imitate the same precision in mathematical science, by laws the same as He governs the millions of worlds of His creation which roll in the boundless regions of space.

Prices of Machinery.

Machines (patent) by Furness, of Liverpool :—

No. 1.—For preparing *Flooring* and other boards—will plane, groove, tongue, and at the same time reduce boards to a given thickness and width. Steam power required—4 horse, size 12 feet long, and 6 feet wide. Price £250.

No. 2.—For *Mouldings* for doors, sashes, skirtings, frames, &c. &c., — $\frac{1}{2}$ horse power, size 6 ft. by 3 ft. by 4 ft. Price £65.

No. 3.—For *Morticing*, — $\frac{1}{2}$ horse power, size 5 ft. by 5 ft. by 9 ft. Price £40.

No. 4.—Hand *Boring* Machine. Price £8.

No. 5.—For *Squaring* up timber and *Planing* boards,— $1\frac{1}{2}$ horse power, size 20 ft. by 4 ft. 6 in. Price £125. If to plane 25 ft. long, price £135. If to plane 50 ft. long, price £185.

No. 6.—*Tenoning* Machine,— $\frac{1}{2}$ horse power, size 6 ft. by 4 ft. 4 in. by 5 ft. 6 in. Price £50.

No. 7.—*Sweep Saws* for circular work,— $\frac{1}{2}$ horse power, size 4 ft. by 3 ft. by 4 ft. Price £25.

Machinery (patent) by McDowall & Co., Johnstone, Scotland :—

No. 8.—*Vertical Saw Mill*, will cut timber 5 feet deep, 1 horse power for each saw used. Occupies space (excluding for passages, &c.) 11 feet wide, and in length,—double the longest log should be provided for. Price £660 to £750.

No. 9.—*Self-acting Circular Saw-bevel*, from 4 to 8 horse power, size 7 ft. wide, 6 feet long. Price £120.

No. 10.—*Vertical Frame* for cutting deals into thin wood only, size 6 ft. by 4 ft., power, from 2 to 4 horse, or $\frac{1}{2}$ horse for each saw. Price £120.

Bombay, 16th April 1858.

TOM CRINGLE.

BISHOP CARR—THE BYCULLA SCHOOLS.

SIR,—Permit me to say, that I think your remarks in Thursday's issue on the testimonial mania do your judgment much credit. The

late Bishop Carr was simply a simple, good old man, who died without leaving one footprint of genius or special industry behind him.

During his Episcopate the boys in the Byculla School had fallen into a mental condition so low as to look more like idiots, with the school as an asylum, than children of the most enlightened race on earth. The *animal* expression of these poor children's faces, say in 1845-6, was something fearful to behold, especially when first seen by a person newly arrived from England. They had a full proportion of religious instruction, I doubt not, but I feel confident their minds were too dull and feeble to receive or appreciate the divine love of God, cut off as they were from all human sympathy and communion with man, except the dull sameness of daily school lessons. The credit of lifting the boys out of this frightfully inane state is due to laymen schoolmasters, not to the late or present Bishop. For years a fever-giving swamp has existed on the north side of the Church, whilst mounds of earth have been available to fill it up; and, by the labour of the boys, convert it into a beautiful garden. What is even the present state of this school for boys? (I'll leave the girls' school out of the question.) Although some faint lines of intellectual expression have been traced on their beforetime animal faces, are they receiving an education to fit them for the commercial and mechanical wants of the rapidly-expanding demand for mechanics and clerks? Ask any one to receive a boy from these schools, and they laugh at your simplicity. They have been tried, and found woefully wanting, in the Bombay Education Society's Press, an establishment founded with the express view of giving employment to these boys, and presided over by two of the most enlightened and equable tempered men in Bombay. Yet they cannot succeed in teaching them the printer's art, notwithstanding that many details of it are performed by Mussulmans and Hindoos, who don't know big A from a bull's foot (this don't apply very well here as an illustration, but is expressive of my meaning).

I may be told that this and that other clever fellow were once Byculla School boys. True. But they are the solitary plums in the yards of pudding we have been discussing. There are some boys you may pitch on to a dunghill, or sink ten thousand fathoms deep in the sea of ignorance, but in the face of all surrounding influences they rise buoyant to the surface, and attain eminence in spite of misfortune. The sight of schoolmasters is a horror to such as these: they can teach themselves in the free school of *Experience* around them. This want is the halting leg of the Byculla School boys. They *see* nothing, *hear* nothing, but school and church singing, church singing and school. Ask a Hindoo clerk the names of our common mechanical tools, and he will be as innocent of their uses and names as would have been a South-Sea Islander in Cook's time. The Byculla School boys are in the same difficulty. But ask the same question of an English-bred boy, and he will not only tell you their names and uses, but show you *how* to use them. How has he gained this knowledge? Simply by loitering at the carpenter's shop and the blacksmith's forge on his way to school, to indulge that blessed prying, inquiring disposition of, and proper to, boyhood; though as a counter lesson in *punctuality* he is birched for being late in school!

But thanks to Dame Nature, the birch don't stop him from taking the next lesson to hand.

Our children at home are *chiefly* educated by "sights and sounds" picked up in the streets. Let these poor boys of the Byculla School get a half-day holiday by the half dozen at a time, under the care, not of Serjeant Rattan, but of one of the monitors of their class, to see the sights of Bombay. Let the Master point out to them the places most noteworthy of a visit, but leave them free agents in the choice. There are plenty of *eye-instructing* schools, viz.: the Railway Workshops, P. & O. Dockyard, the Government Dockyard, Mint, Gun-Carriage Department—where, by the way, there is the rifle-bullet making machine, worthy of a visit by children of larger growth. Let them visit the Bunders, to get a hint of the importance of Tret and Tare from seeing the numerous articles landed for Dame Commerce. Then, again, there are the Cotton Presses, and Seed Winnowing, at Colaba ; then a "step-out" visit to the Lighthouse, to wind up with a stolen dip in the sea at Back Bay, and home in good time to spin lots of pleasant yarns, and compare notes with previous explorers. Let us hope that the new Head Master, Mr. Farnham, about to arrive, will, with his reputed fast school learning, possess a good slice of common sense mixed up with it. Are the boys permitted to read Newspapers and "Punches?" If not they ought to be. Those in authority over them have only to give a hint that such would be allowed admission through the great gates, and streams of fun would flow in to vary the dull cold round of school literature. We shall see.

Bombay, 8th December, 1859.

TOM CRINGLE.

THE BYCULLA SCHOOLS.

SIR,—In reply to my charge of defective education in the Byculla Boy's School, your correspondent C. says he doubts "whether a writer who errs so strangely when treating of the *present* can be safely trusted in speaking of the *past*." This opinion may go for what it is worth. I know the opinion of outsiders too well not to be aware that what I have written in your columns of the 10th instant, is well known to be true. But even if C. had witnessed the then state of the boys, I doubt whether he would have been conscious of such a deplorable state of utter mental prostration as they then labored under, for he appears to dwell with great complacence on the fact of their *now* receiving "a greater amount of intelligent Scripture knowledge than any school in this presidency."

I don't doubt it, and I have as little doubt of their getting such a bellyful as to give them a surfeit ever after. I have seen many *moral* boys, but has C. ever seen a *religious* one? I have not, and I think I have kept my eyes as wide open as C., and can see as far through a brick wall as he can.

To behold one of our modest, handsome, bold-eyed, straight-limbed, British boys is one of the noblest sights on God's earth. His Creator cuts out self-instructing and self-acquiring knowledge for this little *man* that many Padres and Schoolmasters wot not of. The mother or loving sister is the best High Priest he can have to teach his short, pure lessons of prayer to his "Father which art in heaven." This beautiful creation of God neither knows nor cares aught about sects and "Churches," stoles and bobbings to the right and to the left (stupid Guys), by which our *learned teachers* have polluted the pure stream of our Protestant religion.

The four clever boys elected to the Sub-Engineer Department (!) of the Dockyard on the very day I aspersed their Alma Mater was a strange coincidence. But *who* examined them? And *what* were they examined in? There's the rub. Was it not to the kind feeling of the kindhearted Commodore Wellesley to whom they owed admission with few questions asked? Will the school bide the test of an examination by Mr. Howard, who knows not Chesterfield's maxim to his son, "If you are not, *seem* to be."

It is quite refreshing to hear C. say, "It is a farce to say that the boys have no more knowledge of our common mechanical tools than a Hindoo clerk : during the past half-year many lessons have been given on the lever, wheel, and axle, &c." The *naïveness* with which this is written speaks volumes for the teacher and the teaching! Were these *varied* teachings ever changed for a lecture on the uses of the knife, fork, and spoon?

I don't expect men like C., who perhaps was brought up and educated in a semi-ecclesiastical monastery in England, where the frown of a Bishop acts like the shock from a torpedo, to be capable of judging as to the value of *eye* education picked up in the streets ; the only education they know is of the schoolroom and organ gallery. He deprecates the idea of letting boys of 12 or 13 out of school for a holiday! Ye takers of rooks' eggs, cutters of black-thorn, sliders on ice, runners against stage-coach horses, rowers in boats, bathers in sea and rivers! pray tell him he knows nothing of English boyhood.

Poor James Hayes! Are there to be "no more cakes and ale" because this lad was drowned? Are the boys to wear dirty skins, and the means of learning the useful and manly art of swimming, because James Hayes was drowned a dozen years ago?

But a truce to this small shot practice. I judge of the education given in the school by its *results*, and C. totally loses the drift of my letter if he imagines that I merely allude either to that part of elementary education which is derived from school books or to religious training. What I principally aim at is the utter unfitness, in almost all cases, of the boys brought up in this school, from a want of mental activity and physical stamina, to push their way on among men when they get out into the world, or even among their equals in age, who possibly have not received so much schoolroom instruction as themselves. They seem irresolute and cowed down, having hardly a glimmer of right and wrong, except as connected with what has been dinned into

their ears in connection with the Church Catechism. Does C. deny that anything more than general schoolroom-lore, and knowledge of the faith and duty of our religion, is required to fit budding men for the affairs of life? It is just here that the system of this school shows itself defective. A boy's head may be crammed with every thing of book learning and religious matters, but he shall be in utter darkness as to the way he shall act when sent out of the school-gates, either to sink or swim in his endeavours to push on through life. And sink he does, if not endowed with a self-instructing energy to compensate for that grand omission in his education—that *something* which C. fails to see I have already alluded to. They leave the school dullards of the first water, and with a low standard of mental and physical stamina that speaks volumes to the minds of all right thinking men, that their education is not worked out on sound mental and healthy principles apart from school training. Unless the organs of wonder and the ideal senses be healthily exercised in youth, the brain will always be dull and feeble. Give a boy a choice as to what theatre he would like to go to, and he shouts for Astley's, because there is food for wonder and admiration. Is he to ride on a coach? He selects the outside, because he there also enjoys the same healthy excitement. Take a dull boy from school and send him to sea, where his wonder and ideality are excited by witnessing gales, hurricanes, the storm-beaten shore, battle wreck, strange lands, and stranger inhabitants, besides a hundred other "sights and sounds," which, as it were, acts like an electric spark on the brain, unlocks its rusty hinges, and throws open its portals to receive that education of the school which the dull schoolmaster in vain strove to instil into it, before wise old Dame Nature unlocked it. Who but C. has not witnessed this transformation?

Will no boy who has received his education at this school couch a lance in its favour? Will any one who has been educated here, and has arrived at years to fit him for a judge, say that in my first letter I have written one tittle beyond mild facts? Is C. anxious that *Asmodeus-like*, I should lift the veil further?

Friend C., I did not attack the coming Mr. Farnham. Let us judge *his trumpet* by the harmonious educational tunes it gives out. If, on his arrival, he stand the shock of the first twenty-four hours at the Byculla School without saying, like our old friend Dominie Sampson, *Prodigious*, I am not

Bombay, 13th December.

TOM CRINGLE.

A PLEADING FOR INDIAN ORPHANAGES.

To His Excellency Sir George Clerk, K.C.B., Governor of Bombay.

Right Honorable SIR,—I take the liberty of thus publicly appealing to your benevolence and powerful interest in favour of the Orphan Schools of this Presidency. If I am rightly informed, you have still unexpended a large sum of money which was subscribed towards the

Famine Relief Fund by our generous fellow-countrymen at home. The distress has happily abated which this money was intended to relieve, and I would now beg to suggest that you obtain permission from the donors to appropriate a sufficient sum for the purpose of sending to England all children of British blood, above six years of age, now in the orphanage schools of this Presidency, in order that they may be brought up and educated in one united school, to be called the "The Indian British Orphanage." Many of the fathers of these children died on the battle-field, fighting for their country's honour and for the maintenance of British rule during the great mutiny, and against such odds as to stamp every man a hero. Others have been bereft of parents by an equally fell destroyer—a sickly climate—whilst doing their duty as British soldiers. Britain, generous and grateful, would grant to such an institution its warmest sympathies and a liberal support. The boys who are on the military foundation of the Byculla School, as also similar cases from the other orphan schools, might at once be sent to the Royal Military Asylum, or Duke of York's School. If the other orphanages were united into one school, as proposed, and planted in the mother country, it would then be possible to educate the children with every prospect of their becoming useful members of society, and inheritors of British pluck and sound mental faculties; where they now form a large germ of British blood, sinking down to the same low mental and physical standard as those sprung from the Portuguese.

Here they are surrounded with an atmosphere of vice which envelopes and poisons every child (even those of the better classes) whose parents are not ever on the watch to guard them from its moral sapping influence. So baneful and certain is this corrupting influence from contact with servants, and other low caste natives, that the majority of them grow up wanting in that high reverence for truth and honesty (with their consequent indexes stamped on their features) which is painful to behold, and which must exercise a perpetual influence in debasing the British race in India. Other European conquerors of India have allowed their children to remain in the land, and therefore, to degenerate; the consequences of which are too well known to be named.

The mental power of the children of these orphanages has fallen so low, that they do not possess the capacity of native children of corresponding ages. This is in a great measure due to their never having shared the joys proper, *and necessary*, to healthy childhood; and also to a false system of education, both religious and secular, which allows but little relaxation, and perpetuates disgust for what is attempted to be taught.

If our clergy, or schoolmasters, imagine they can create religious feelings in children of tender age by continually taking them to church and constantly boring them with catechism and prayer-book, they have studied human nature to little purpose. I do not think it possible to make a boy *religious* in the world's acceptation of the term. I have never witnessed a spark of it in any boy possessing a healthy and cheerful mind. No; the Great Maker appears to imbue youth with an

insatiable desire (1) to improve to the utmost his physical stamina ; (2) to teach himself in the wonders of nature and art, for which he is provided by God with a never sleeping, prying, curiosity which nothing can abate, and which healthy trait the wise man loves and fosters.

The teachers of youth who ignore these universal laws of nature, know not their business. If also they do not minister to the imagination of childhood by means of books and sight-seeing, they are, I think, equally unfit as teachers ; for, I believe, without exercising this faculty the brain gives not that bright and willing response to educational training that it otherwise would ; and that clergymen, professing to teach youth, should think that by taking children continually to church, besides numerous religious exercises daily, is the way to make them either religious or intelligent is the most grievous mistake that can be committed. Look at the nations who have had too much *church* without the free, healthy, religious faith which should go hand in hand with it ;—all have sunk in the scale of truth, courage, and civilization. Spain is now only lifting her head above water, and regaining a scintillating spark of her ancient manhood and honesty, after suppressing monasteries and nunneries which were sapping her very life blood. I trust, Sir, you do not think this is foreign to my subject, as I feel it is intimately related to it as an illustration of nations forgetting God in the worship of form.

If it were not desirable to send British offspring home to be educated, and enjoy all the physical gifts our healthy climate bestows, why do we strain every economy, and self-lacerate our keenest feelings in the earnest desire, to send our children from us to be educated in the mother country ? To those who can afford to do this, it would be deemed the most cruel and grossest tyranny if they were forced to educate their children in India, where it is nearly *impossible* to rear an English child in a healthy, moral, mental, and physical state so as to fit him to become a good citizen when he attains maturity. Mental and physical requirements cry aloud against it. It may be said that these schools can be located in the hilly districts. It is true that the *physique* of the children may be more robust, but there is not a doubt in my mind but that they would be sunk in a lower state of stolid brutality than they are at present. Are not all the hill tribes of India inferior in mind and physical beauty to the dwellers of the plains ? Why is this ? I reply, want of communion with the arts and sciences, which aid so much in civilizing nations. Would it be wise to banish youth to a high, bleak hill, cut off from all that stirs the intellect of nations ?

There is an article on education in the *Times of India* of the 20th Sept., 1861, which should be written in letters of gold. I trust, Sir, that you have read the part referred to, as it is the first shadowing forth of the rights of childhood in respect of what his young brain is susceptible of *receiving*, as compared with what is mistakenly thought to be the giving powers of schoolmasters. As for the poor children whose cause I plead, they want more “ Punch and Judy,” and good roast beef or milk, and less of the Kings of Israel and the History of Palestine.

Let these children use the Lord’s Prayer, and let its beautiful lessons be explained to them in a simple and fatherly fashion, and we may rest

assured that it will draw them nearer to God than if they knew the whole Bible by heart. When their brains shall have acquired manhood's strength, there are far greater chances of such becoming faithfully religious towards their God, than the poor child who was taught mere lip service without mental strength to grasp the mysteries of religious faith. Can any child (or can most men) master the mysteries of the Athanasian Creed? I fear not.

I have only to add that the charitable support of these schools has so alarmingly decreased, as to cause the most stringent economy to be observed, including the discharge of old servants—*and a reduction of the food of the children*. The increase in the price of food, labour, and material has attained such a pitch in Bombay, as to make it more economical to feed and educate these children at home than in this country; and when the drawbacks now pointed out are taken into consideration, I cannot but think there is no other course open.

I only trust that you, Sir, may view it in the same favourable light.

I am,

Sir,

Your most obedient servant,

November 15, 1861.

WILLIAM WALKER.

(From the *Times of India*, Nov. 18, 1861.)

The fertile brain of Mr. W. Walker has perhaps seldom given birth to a more abstractedly felicitous proposal than that embodied in his excellent letter to Sir George Clerk, which appeared in these columns last Friday. He proposes that the surplus money remaining from the Famine Relief Fund be appropriated to sending home all British children above six years old, now in the orphanage schools of this Presidency. He suggests that the boys who are on the military foundation of the Byculla School might be sent at once to the Royal Military Asylum, or the Duke of York's School; and that the other orphanages might be united into one school, to be located in England under the name of the "Indian British Orphanage." We call these plans *abstractedly* felicitous, because if carried out the results would be admirable, but at the same time we cannot help seeing the practical difficulties to be got over before they can be realized. If the appropriation of the Famine Relief Fund surplus were all that had to be done, the matter would be comparatively easy; nor could Sir George Clerk, as trustee of this fund, discharge his trust better than by sanctioning its appropriation to this particular object. But if we take Mr. Walker's project in its entirety, we see at once that a great deal more is implied. For bringing this comprehensive and original idea into actual existence, the sanction of two or three Governments, the co-operation of half a dozen different boards, and, what is still more difficult, the harmonious combination of two or three religious denominations would be required. The mind recoils before the mere imagination of the oceans of correspondence and

sandy deserts of obstacles, both real and official, which interpose themselves between the present state of things and Mr. Walker's idea.

Mr. Walker is, however, perfectly right in his general assertions as to the imperative necessity of sending British children away from this country in order to avert their deterioration, both mental and physical. No law of nature is more certain than that European children suffered to grow up to maturity in a tropical climate must degenerate,—must be inferior to what they otherwise might have been. We see in the pale faces and loosely compacted forms of British children in this country, that "struggle for existence under unfavourable conditions," which Mr. Darwin points out as operating throughout the various classes of plants and animals, as bringing about the extinction of races. We see this too with the consciousness that man is not like a plant or a lower animal, and that it behoves him, when conditions are recognized as unfavourable, to withdraw himself and other members of his species from them. Abstractedly, then, we accept Mr. Walker's views as perfectly sound. Were the English community in India a communistic republic, or a *phalanstère* according to the system of Fourier, no doubt one of its regulations would be that every child should be sent to Europe from six years old to seventeen. Under the present circumstances all who are rich, or even tolerably well off, adopt this course as an absolute necessity. It remains for charity or public spirit to consider whether the poorer classes also, and especially the orphan children of our soldièrs, cannot be preserved from the terrible alternative of deterioration.

We shall be very glad then to see Mr. Walker's suggestions carried rather more into detail. He has sketched a grand whole, but the filling in of the picture will, we fear, present many difficulties. We do not wish to see Mr. Walker's very praiseworthy suggestion fall to the ground, nor are we arguing that it should be abandoned, but it is of little use to suggest to the Governor of Bombay that all the orphanage schools in the Presidency should be amalgamated, unless the managers and trustees of those schools show an inclination to take up the idea. We should like to see the opinion of some of these gentlemen upon Mr. Walker's proposal. With regard to the Byculla boys who are upon the military foundation, less difficulty would be found in acting in their case. The Government have the affair in their own hands, and might easily apply for admissions to the Duke of York's School. But would it be right to devote the Famine Relief money to a particular class like the military orphans, who were before Government pensioners? Surely the Famine Funds ought to have some more general application. It seems to us, then, that while the end aimed at by Mr. Walker is excellent, the means by which he proposes to attain it, are as yet too undefined. Doubtless on further reflection he may be able to make them more clear.

Mr. Walker's picture of the comparative joylessness of British school children in this country is graphic and true. With him we wish for them more "Punch and Judy" and less "Kings of Israel." But we hope that he is mistaken as to the shortness of the rations in the charitable schools. Within a short time we were informed that at the Byculla Schools, each child had an allowance of meat which exceeded

what was thought necessary for a British soldier. However this may be, we consider that Mr. Walker has done good service in calling attention to the subject, and we trust that his suggestions, even if modified, may not be thrown away. Any one, with a genius for organization and a spirit of perseverance, who could succeed in carrying Mr. Walker's idea through all opposition, would do a great service to a large and unfortunate class of the British community.

(From the *Times of India*, Nov. 25, 1861.)

SIR,—The proposal of your contributor, Mr. Walker, with respect to the manner in which the superfluous portion of money from the Famine Relief Fund might be disposed, is without doubt a truly philanthropic design. In the subject matter of an editorial in your columns, I perceive that though you applaud the benevolence of the scheme, you are inclined to view with doubt the practicability of it. I entirely coincide with you, but as you do not offer any solution of what you admit to be a praiseworthy scheme, may I venture to submit one. I propose that it would be far better that the soldier's monthly allowance at present granted by Government to the parent of the child (which is two rupees and a half) be devoted to the purpose of sending them to a climate where their moral and physical endowments may become developed, instead of letting them knock about the purlieus of an Indian bazaar, absorbing all the low cunning and vice of its precincts. Such an institution might be established at the Cape or elsewhere, with a little aid from Government. These suggestions would be equally applicable to the children of the soldiers, whether entirely of European parents or of a native mother. There is no doubt that the offspring of a European and native, no matter in what proportion the blood may be mixed, has the same tendency to degeneracy in India as that of the purely European child, as may be seen in their hydrocephalic-shaped heads, with the face increased at the expense of the cranium, one of the most marked signs of moral deterioration. It is a common remark that the Indo-Briton displays in his character the vices of each parent and the virtues of neither. Those who make this assertion ought to take into consideration how far character may be modified and influenced by association and training. I myself believe that under favourable circumstances the admixture of European and native blood may be conducive to the development of a very intellectual being, the bolder and more adventurous qualities of the one becoming as it were tempered with the patient energy and frugality of the other.

PATROS.

II.

SIR,—With many thanks for your able and favourable editorial on my letter to Sir George Clerk on the removal of British Orphan Schools to England, I now beg leave to add a few remarks bearing on the same subject.

I will first observe, that should Sir George Clerk kindly take an interest in this important and benevolent scheme, and would express a wish to be furnished with the views of the directors of the various orphanages, he would no doubt gain valuable information which could be placed in a tabular form, so as to show at a glance the sums available from each school to devote to the settlement of the children in one united large school at home. When this information shall have been completed in Bombay, the result might be submitted to Lord Canning and the Governor of Madras, as a fitting philanthropical scheme desirable to be embraced in one brave effort by the three presidencies; when the thing might be considered done. The only difficulty I find in its accomplishment is the want of funds sufficient to build the schools in England, and to furnish and start them fair.

This first step I consider to be the duty of the State to take, and it will then be found that the means now spent upon the children in India will maintain them more substantially in England.

I assume that no one disputes the desirability, the necessity of sending children of British blood to England who are born in India. Every one, who can by any means compass that object, does so. I know of no excuse other than expense why European orphans thrown on the State, or on the community, should for that sordid reason be doomed to grow up a degraded class of our own proud and cherished race. To a rich nation like ours, it is certainly a disgrace to let the "bone of our bone" dwindle away till they become a byword of reproach to the heathen around.

Let us say, then, that expense is the sole hindrance, and I am confident that obstacle will be as naught, if a School House for Indian Orphans could be established.

The proud Roman Empire would not have suffered such a state of things, shall we do less who could hold Rome in the palm of our hand? When we know that to rear European children in this country is to doom them to a slow atrophy of mind and body, why should we all not collectively strive to avert such an awful doom, as we do individually in guarding our own offspring from such a fate.

There has been springing up again of late the old foolish talk of colonizing Indian waste-lands with British settlers. I therefore make no apology for repeating the fact that children of European parents born in India grow up weakly, that the progeny of such seldom attain maturity, and the last expiring snuff, the third generation, *never have children?*

Great Britain with her mighty pluck, with few men to maintain her honour and guard her colonies, should cherish every human atom who claims blood relations with her, but when the atoms under reference are left helpless, their fathers dying on the battle-field, sealing with their blood their country's dominion, the charge of such children becomes a sacred duty of the State.

I start on a general basis that the schools shall be open to all British orphans from India, white and coloured, under certain by-laws for

admission, &c. We may then compute that Bengal will send children in the proportions of 5-12ths of the whole, Madras 4-12ths, Bombay 3-12ths. If these proportions are approximate it matters not which presidency we take for our data. Those for Bombay are to our own hand.

The Byculla Schools may perhaps be taken as representing half the Bombay Presidency, the other half being made up by all the other schools we have in the State. Take the last report of the Byculla Schools. The average strength of the school was 268 above eight years old.

Then Bcmby would supply an average of.....	540
Madras.....	720
Bengal	900

Aggregating a school of 2,160 children, to be divided equally into two schools, boys and girls.

As children under eight years of age could not take care of themselves on board ship, I would retain them in the Poonah Branch Infant School until they attained that age. I at first was going to propose that this scheme should be confined to children of unmixed European blood only, as with them the change to their mother country is *a physical necessity*, which it is not to the others; but when we take into consideration how the children of coloured blood would improve their physical stamina, and be fitter progenitors of a more healthy and robust generation, to say nothing as to their being fit to fill situations in merchants' offices, &c. &c., and that if kept here a separate establishment would be necessary—the best and simplest plan is to embrace them also in the scheme.

We should have to provide the following passages, the price of which I have ascertained to be correct :—

	Rs.
268 boys and girls(in separate ships) at Rs. 100 each....	26,800
Outfit at Rs. 10 each.....	2,680
4 Matrons for the girls at per passage home 200.....	800
Passage Money for ditto.....	600
	<hr/>
	30,880
2 Masters for boys per run home at Rs. 250	500
Passages for ditto	300
4 Native Servants at Rs. 60 for passage	120
Passage for ditto.....	400
	<hr/>
	32,200
Saving in subsistence whilst on board ship ; calculated at 4 months	5,505
	<hr/>
Total expense....	<u>Rs. 26,695</u>

The revenue for administration, were the children sent home, would be—

	Rs.
Subscription allowances from Government, &c.	33,247
Miscellaneous.	21,122
Saving in rent by the Printing Establishment occupying the Boys' School	2,544
Hire of Girls' School	2,600
Hire of Hospitals	1,000
Total Revenue.	<u>Rs. 60,513</u>

This sum on 268 children would give £22-11-7 per head.

Who will deny that with such a revenue as this the children would not be well fed, clothed, and educated in a fine healthy part of Yorkshire, where food, fuel, and clothing are cheaper than in any other part of the world?

I have no doubt the average cost of all children in India is more than £20 a year (Byculla School children cost last year £22 per head); the Infants at Poona cost £20-6-0 each per head, which is a high rate. I would engage to place them out in country places with good motherly dames, having children of their own, for less money, where they would be as rosy as pippins and merry as crickets;—*we never see a child making a mud pie in India.*

It will, with these facts before us, be an easy question to solve, by reference home to some of our chief orphan schools, to ascertain whether that sum is not ample for the purpose, when conducted on such a large scale.

The gain to the commonwealth in having strong and healthy, instead of puny, debilitated children growing up to serve the state, would be worth ten times the petty extra cost, and we should have the satisfaction of knowing that we had done our duty to the helpless orphans,

W. WALKER.

(From the *Times of India*, Dec. 23, 1861.)

THE well-conceived project of Mr. Walker for transplanting to the soil of England the children of Indian orphanages, has received its quietus, as far as regards the originally-proposed means of carrying it out. The residue of the famine fund is now set apart as a reserve to meet future times of scarcity, and is therefore no longer available for Mr. Walker's designs. But it does not at all follow that those designs need be abandoned. A promoter of a public object ought to be endowed with a tenacity of purpose not easily shaken. He should rise superior to a hundred obstacles. He should be something of the temper of the gnat,—

That settles, beaten back; and beaten back,
Settles, till one could yield for weariness.

His motto in short should be *S'il est possible il est déjà fait, s'il est impossible il se fera.* And we have little doubt that our fellow towns-

man has these qualifications, and that if he now is silent on the claims of the Anglo-Indian children, it is not that he has ceased in his aspirations after "mud-pies" and "more Punch and Judy," but only that he has recoiled to make a better leap next time.

We wish to suggest to Mr. Walker the direction in which his "leap" should be taken. The proposal which he has started, with regard to the children of the lower class of Europeans born in this country, is one of really national importance. It is all very well for people to look at the children in the Byculla Schools, or any similar institution, and to say, "They are very happy, and do very well where they are;" but take those children in ten years' time, and then decide whether they are equal, either physically or mentally, to what they might have been had they been sent home for their adolescent years. Again, take their offspring, if they have any, and judge whether a natural tendency, in fact a natural law, of degeneration has not plainly manifested itself. One or two exceptional cases of Anglo-Indians, who have been born and brought up in this country, and have turned out not badly, avail nothing against the universal rule, which is so certain that no rich European in his senses would dream of acting in opposition to it. With regard to the children of the poor and the orphans of our soldiers, it is a question of charity whether or not they should be condemned to be dwarfed and withered in mind and body and reduced below the type of Englishmen. It is, however, at the same time a question too great and wide for mere local benevolence. Evidently it should be dealt with in a large way by the people of England, on behalf of those who support the English name in India. The English nation is much interested in its consideration. Nothing can be more important than to avoid as far as possible that damage to the prestige of our national character, which must necessarily arise from the growth and increase in India of un-English Englishmen. On the other hand, if the soldier, the engineer, and the industrial could each feel that his children were or might become the objects of their country's care, a new sense of confidence and of permanence would be instilled into the minds of a valuable class of persons. Under such provisions something like colonization of parts of the country would be for the first time rendered possible. For English families might for generations continue to maintain their position in India, with the sole condition of the temporary removal and return of the children. We do not say that all such children should be sent home at the expense of the public. Those whose parents could pay for them should do so as at present; for many pay the Byculla School fees. But there should be an organized system for the transmission of children, and for their reception and education in England. All who in this country now subscribe to schools and orphanages, would surely pay the same amount with still greater willingness to provide a benefit so much greater for the children. And owing to the expense of living in many parts of India, and the high salary of masters and mistresses, we believe that the cost of a child's passage to England and back again, might be saved out of eight or ten years' schooling, if that schooling was in some country locality of England instead of out here.

But we acknowledge that the measure is one which would require to enlist national sympathies, and to be based on a liberal contribution list. Were the plan carried out on a large scale, so as to meet the wants of all the Presidencies in India, the obstacle of religious difference would fall to the ground, for the principal denominations might each have their separated asylum. All that is wanted, then, is that some influential person should stand forward to recommend to the English people, an object so well worthy their arrangement. Every one's mind will at once revert to the Earl of Shaftesbury, who has of late begun to turn his attention to Indian affairs, and who would at once most appropriately and most efficiently promote an important work for the welfare of the Indian Empire. We would suggest to Mr. Walker that he should lay before Lord Shaftesbury the able letters in which he before advocated his plan, together with such additional details as subsequent reflections may have furnished. It would be no light glory to connect one's name with the foundation of a great national asylum in England for Anglo-Indian children.

JOTTINGS FROM HOME.

SIR,—Although the following incident occurred on the passage home, yet it affords occasion for a suggestion which I have long had in mind to offer.

In our passage from Bombay to Aden, during the month of July 1858, in the height of the monsoon, a lascar was washed overboard from the bowsprit. The watchful quartermaster at the helm threw the man one of Carte's life-buoys, which fell in the boiling sea close to him. The steamer having full fore and aft sail on, it took some little time to luff up in the wind's eye and take the canvas off her, when the vessel was brought round and run down before the wind in search.

Eager eyes from deck and masthead swept the crested seas on every side, in search of the hapless man, until we all despaired of seeing him again, and the steamer was put on her original track, and the poor lascar was given over as lost, when a thrilling cry from the foretop directed our gladdened eyes to the stretched-out hand indicating the whereabouts of the man, who at the moment was upborne on the crest of a huge sea, and became visible to all on board. The steamer was run up abreast of the man and luffed round so as to form a breakwater, when a Seedie jumped overboard and rescued the bold swimmer, who had battled with a heavy sea for twenty minutes.

The Seedie received the Royal Humane Society's medal some months afterwards; and it is worth relating, that when the Seedie went forward, proudly displaying his medal, the lascar whom he had saved insisted that *he, who had incurred the chief danger, should have had the medal,* and there is little doubt that he will either die or drown in that belief.

In a day or so after the man was rescued, I asked him why, he being so stout a swimmer, had not at once seized on the life-buoy, and thus supported himself until the ship could be put about for his rescue?

And let his answer be remembered. He replied, " I tried to reach the buoy, but whenever it was raised on the crest of a sea, the wind and the swashing scud drove it yards from me ; and although I tried again and again to reach it, it always eluded my grasp from the same cause."

In this reply we have the key to solve the fate of many a poor fellow, who, after a tantalizing swimming chase, getting weaker from each effort, turns a despairing last gaze at the tardy ship, then at the fast-fleeing *life-buoy*, a curling crest of a sea falls on his doomed head, and —all is over.

My suggestion is this. Let a canvas bucket be made, twelve inches long and eight inches broad, the mouth of the bucket distended with a cane grummet, and fitted with a lanyard, say four feet long, attached to opposite sides of the life-buoy. When dry, the bucket and lanyard will weigh about one pound, and will prove no hindrance in casting the buoy overboard. On reaching the water, the bucket will sink as far as the lanyard will allow, and will only tax the buoyancy of the life-buoy some three or four ounces ; and when a sea shall strike the buoy, or the gale act on it when on a sea crest, the retarding bucket will be a floating anchor to it, and prevent its drifting away from the life it has been thrown to save.

I also know from experience, that when a life-buoy has been cast to a man overboard, followed by busy haste to arrest the ship's course or lower a boat, all trace of the *position* of the buoy is lost, even to the eyes of those on board. No wonder that a boat's crew, so much nearer the level of the water, with no compass to guide, and the judgment often at fault from excitement, often pull wide of the direction where the struggling man is.

To remedy this, let there be kept, close to each life buoy, a *balanced floating flagstaff*, with a light pennant attached to the top, and loaded at the base, with cork-float in the middle of the staff. This float can be made in an hour by any sailmaker, with a piece of canvas and a few bottle corks nailed to the floating mark of the staff. Thus, when a man falls overboard, the life-buoy should be first cast to him, and then the "life-buoy indicator" should be launched like a spear as soon after as possible.

If you will kindly give this a place in your Overland Summary, it may be deemed of sufficient importance to be circulated by the home Press, and acted on. And perhaps our worthy Commodore of H. M. Indian Navy will give the plan a trial.

Bombay, 7th October 1858.

TOM CRINGLE.

SHIP "EMMA JANE" CASE.

SIR,—I am glad to see you have taken the trouble to expose the trumped-up charges against Captain Wood, of the *Emma Jane*. I know not either the captain, consul, mates, or seamen, mixed up in this affair. But this I have nearly daily evidence of, viz., that the men who

at present man our merchant ships are, as a body, the most lying, lazy, unseamanlike scoundrels in Her Majesty's dominions.

If you will only take the trouble, you will find that all these rows between captains and crews took rise since the abandonment of the Marine Apprentice system was allowed to be optional with shipowners. Before this, the merchant seamen were a morally healthy body, and none of the "brutality of skippers" was heard of. But now the captain finds, that the moment he casts off the dock-head warps, and sets his crew to work, that those he engaged as seamen have merely picked up a smattering of the noble craft from Raftcliffe-highway communion, and the experience gained during two or three trips in an Irish pig-boat. Lots of them do not know how to take a cast of the lead, or a trick at the wheel. Then again, shipowners have become such close shavers in matters relating to ship expenses, that they have fixed the seamen's wages at so low a rate that none but the most lawless and insubordinate seamen, who fear the stricter coercive discipline of the royal navy, will enter. These, and a moiety of unsuccessful runaway scamps from the Gold Diggings, who go to Australia for £5 and a "pull and haul" passage, these, after reaching England again, and finding the "cold shoulder" raised against them every where, ship as seamen with all the confidence and *nonchalant* air of one of Nelson's forecastle men.

Just imagine a captain at sea with men of this stamp. The only two or three seamen he has, constitute themselves the bully boys of the crew, hold the "riff-raff" portion of their shipmates in subjection, and inoculate them with all the bad seamen's bad dodges—and after painting in glowing colours the brutal pleasures which are to be found in Bombay, plan and act hardy schemes of insubordination during the passage, for the sole purpose of getting their discharge by refusal of duty, and then entering the Indian Navy, or obtaining the higher wages given from this port. I see the (London) *Times* has taken up the "brutal captain" humbug in favour of the seamen. How we old salts laugh at you land-lubbers in dealing with these questions. Do you ever reflect that captains of ships are men of feeling like yourselves? Have wives, children, sisters, homes, and education the same as yourselves, and are subject to the same civilizing influences which these produce; and yet you look on them, and write of them, as so many Calibans created by the wand of Prospero, forgetting, blind moles that ye are, the class revealed to you on the trial of three of the crew of the *Eastern Monarch* in 1857.

From time immemorial, any man who ships for a seaman, to do a seaman's duty in times of tempest and peril, when the muscle of every finger in the ship is worth gold in battling for dear life, when it is discovered that some of the men are mere longshore riff-raff, these men may look out for squalls! They are sure to be more or less hardly dealt with, chiefly at the hands of the crew themselves; but seldom with anything like brutal cruelty, more than you will find under similar circumstances on shore.

From what I know of seamen, these men were of the same useless stamp, and became the "butts" of the ship in consequence. Mr. Hatfield, just smarting from comments on the *Helen Mar* case, lent a too cre-

dulous ear, perhaps, to the trumped-up case you have so impartially exposed, and thus may be excused, as he will not be taken in so easily in the next "brutal captain case."

5th September 1859.

TOM CRINGLE.

THE FIRST OF NOVEMBER.

SIR,—“What shall we do on the 1st of November?” asks a “Loyal Subject” in the *Bombay Gazette* of the 20th instant.

I say, Let’s put on sackcloth and ashes. Of rejoicing let no man speak. Let’s talk of added Custom Duties, Trade Licenses, and threatened Income Taxes. Let’s sit upon the ground, and tell sad stories of the death of John Company. What have we gained by his successor’s rule? Imperial Ministers have for generations past been famous for getting into political troubles, extrication from which has been by dipping deep into the national purse. Who has plunged India into debt, but Imperial men and measures? I do not believe that any one suspected the past outbreak; but if they did, its prevention lay with the Imperialists—the Board of Control, the Governor-General, and the Commander-in-Chief of India. These authorities had the power to turn India inside out if they had so willed. Instead of which they allowed it to be turned upside down, and then ascribed it to the misrule of John Company.

But now this Delhi-Oudean conspiracy has been crushed, and the name of the East India Company blotted out, what has Imperial policy done for your “Loyal subjects” (loyal humbugs, I call you)? Have they hung the Nawab of Furruckabad? Have they taxed every city, town, and village which took part in the rebellion, towards paying the expense of chastising them into obedience? If taxed at all, has it been in any proportion to their crimes and their wealth? Have they judiciously disposed of all forfeited personal property, Rajahs, and estates, for the same legitimate object? Have they fostered the British in India who stemmed the first rushing wave of rebellion, and who placed their heel on the head of the serpent before a man arrived from the mother country? None of these things have been done; and in respect to their last-quoted sin of neglect, the British residents in India have been the chief objects marked out for taxation to pay the expenses of saving India! The English people have governed India through place-hunting old Indians in the House of Commons, the latter through the Board of Control, and the Board of Control through Imperially-appointed Governors General and Commanders-in-Chief of India. These various powers have thrown India into debt by misgovernment, and their Chinese and Persian wars, therefore should the English people bear their share of the burden. The Governor General in Council has just taxed a dozen garments sent out to my wife from England—why should he not tax English shirts by levying export duties on Indian Cotton? Why not tax all exports? The burden would, very properly, fall on those chiefly employed in creating India’s indebtedness—viz. the English people and the natives of India.

Why, under this blessed Imperial wise rule, are we keeping up an overwhelming, expensive British Army, when their presence at home is so much called for? The British Lion has got his conquering paw firm on the tiger's throat—yes, and placed it there with a handful of Britons before the large army arrived to assist. Why keep this enormous force here now? Rebellion and its authors are crushed,—every gun, matchlock, and spear has been taken from the people, petty forts have been destroyed, railroads are rapidly threading their way throughout India, and will be available for carrying troops to quell riot or rebellion. In two months hence we shall be able to wire-talk with England within an hour—why then burden this country with a large British Army?

A word with you, Mr. "Loyal Subject" (of this side the Cape, if I mistake not). You know not what you ask for. Your King Stork has been digging his bill into your pockets—don't flatter and stroke him after such repulsive behaviour, or he will gobble you wholly up and leave not an *obolus* behind. Let us see what Grand Inquisitor Wilson Sahib does before we throw up our caps, and—raise the price of Cocoanut oil!

Englishmen now-a-days are not to be taken in by the clap-trap cry of our "Loyal Subject" when he says, "Taken under the fostering care of Her Most Gracious Britannic Majesty, and made to freely partake of the sweets of her blessed sway, will not India forget her woes, and will not her children become a wise, great, and noble nation, enjoying and distributing the blessings of liberty, humanity, and truth?"

B-o-s-h! my dear "Loyal Subject." You have no woes, nor ever had any, except the inherent vices of your race, and which no "blessed benignant rule" will rid you of till you purge yourselves of your vile, stupid idolatry, and educate yourselves, wives, and children, after which you will be fit subjects to adorn the faith of the true, living God. Until you do this you will never be wise, truthful, or humane.

My loyalty is not of *words* but of *deeds*. Where did your thin-voiced loyalty make itself heard when "her blessed Majesty's" rule was threatened, and when Englishmen stood on their threshholds to defend wife and children? I and my countrymen would fight to the death for our Queen, were her life or kingdom threatened. Is your loyalty of the same stamp, or does it evaporate in lip-service, in stinking political clap-trap cries? Put your head in a chilly bag, and weep repentance on the 1st of November.

Bombay, 22nd October 1859.

TOM CRINGLE.

THE COTTON-BALE QUESTION.

SIR,—I quite agree with you in thinking that the captains of ships are ill-advised in adopting extreme measures until they learn what steps the Chamber of Commerce will take to abate the wrong they so justly complain of. But it surprises me to learn their proposed salve for the gangrene they now seek to cure; which is, to free themselves from one

system of native supervision to another, this I opine would soon be quite as bad as the present muccadum clique, in the way of false measuring ; with the addition of keeping the ships waiting for cotton from their dilatoriness in performing their duty.

The captains should have boldly requested the Chamber to petition the Government to enact a law for the guidance and control of the cotton presses, making it imperative on them to turn out pressed bales of a standard weight, and that should *not* expand beyond given dimensions. The presses would then furnish their own ropes as a matter of self-interest, in lieu of using, as at present, lashings made of rubbish hemp unhooked, and consequently with its fibres not laid up with that longitudinal exactness calculated to bear the enormous strain brought to bear as soon as the pressure is taken off the bale. I believe a positive money gain would accrue by using first-class ropes for lashings, by pressing the bales into a smaller compass than has hitherto been attained, and thus save freight measurement. The presses should also be made to adopt a special "press mark" to be stamped on each bale, and should be held responsible that no dirt, stones or rubbish should be mixed with the article pressed, which would release the cotton trade of India from the disgraceful stigma which now attaches to it. Nothing less than some such measure will abate the evil which has so wrathfully but rightfully, excited the captains of ships.

Bombay, 12th January 1860.

TOM CRINGLE.

NATIVE MANSIONS.

SIR.—We were much struck, on a recent visit to a rich Parsee gentleman's house, by its interior fittings and furniture. Everything was in keeping ; rich chandeliers hung from the ceilings of the principal reception rooms, carpets from the best looms of Kidderminster and Brussels covered the floors, and flowered-silk damask the chairs and sofas, which were made of the richest carved and most elegantly-designed blackwood. Choice engravings, hung in appropriate frames, on the satin-papered walls ; articles of *vertu* decked the tables, but amongst them we noticed two or three incongruous trifles, no doubt placed there by the lady of the house from old-cherished feelings of former days, when their fortunes were at the turn of flood.

A chance glance at some of the more domestic rooms revealed lots of those funny old-coloured pictures of fifty years ago, in which Rodney wears a cocked hat as large as a buggy hood, and Queen Caroline looks as if she had just jumped into a coal-sack and placed a coal-scuttle on her head. Beautiful flowers were presented on a silver salver, and wine offered from choice Bohemian cutglass. We arose to depart, our host accompanying us to the entrance; but what a change ! The approach to the portico was untrimmed, and dotted with weeds ; the shrubs were stuck in the ground as chance and the *malee* decided ; the wooden gates were in unsightly contrast with the gate pillars, which were of that pretty

not to say classic, design we so often see in front of the mansions of the richer native gentlemen of Bombay. Under the portico was a huge glass-lamp, hung by a pulley, like a glazed meat-safe. The lamps, with their posts, which lined the approach road, were in that "drunk and disorderly" state, which only a Cruikshank could depict. The posts all leaned one way, and were ludicrously crowned by the old rusty, ugly apology for lamps, with their glow-worm melancholy light, which only made the darkness visible.

We hear that water fountains are to grace the gardens of houses like the one we have described, when we would recommend our native friends to exert the same taste outside their houses that they have undeniably attained within. The lamps now seen mounted on nearly all the gateways of the Bonbay houses are of the kind which, in England, were last seen in Grosvenor Square, forty years ago, perseveringly endeavouring to dispel darkness by burning stinking train-oil, whilst gas was giving a noon-day light in the adjoining streets of London.

May, 1860.

TOM CRINGLE.

THE SECRET OF CHOLERA.

SIR,—The way in which Mr. Brown's letter was dealt with by the Municipal Commissioners, when he very properly requested them to send a qualified person to ascertain the probable cause of cholera then raging in the compound, is rich beyond description. The moment his letter was received, he evidently appeared in Municipal Inspector eyes as "a troublesome man." Mr. Baker pays the visit ordered by his superiors, and finds the offending mare's nest to be the stable manure. Messrs. Tracey and Wilcox take up the cry and say,—“Oh yes, the stable manure!” But why did not the medical member record his opinion on this important point? Perhaps he was indulging in a horse laugh at the idea of a little honest horse manure causing cholera. Did these gentlemen ever see Hodge in “*Merrie England*” pitchforking rich and unctuous stable manure into his cart, his face glowing like a full-blown peony above the frame of a giant?

I go in for a full verdict of acquittal in favour of the stable manure not having had any more to do with breeding cholera than Mr. Baker's remarks have to do with common sense. If asked what caused Mr. Brown's servant to be attacked, I should (like Mr. Brown) point to the grog-shop—stuff inside the bottles, not outside the door.

I would advise every one to buy a maund or two of lime, have a general turn-out of all servants, white-wash their rooms, huts, &c., and taboo the grog bottle, which is the arch offender in nine-tenths of cholera cases.

Bombay, 9th May 1860.

TOM CRINGLE.

GAS-LIGHT.

SIR,—Where is Mr. E. F. Evans who so kindly perseveres to enlighten our darkness. I want to shake him by the hand, and assure him that Bombay will not disappoint his expectations in its consumption of gas. If it was thought a fair commercial speculation to introduce gas into Bombay five or six years ago, when our light-giving oils were only a little more than half their present prices, there can be little doubt of our appreciating gas, now that cocoanut oil is Rs. 5-4 per maund, and castor and sweet oils are Rs. 3-12 per maund. Let Mr. Evans fear not the public-light question, as those along the Esplanade road are, I should say, the dearest in the world. I am confident they are dearer than Argand lamps, which would give thrice the light which they do. Mr. Evans may make as sure of furnishing the public lights of Bombay, as that the sun will rise after the gas is laid on along the streets.

The Bombay Gas Company should not forget that they will obtain a good market for their coal-tar and coke.

Therefore, Mr. Evans, go ahead full steam, and *force success*. It is only outsiders that can awake us from our habitual apathetic sleep.—Your will-wisher,

4th June 1860.

TOM CRINGLE.

PROPOSAL FOR CONVICT QUARRY AT CARANJA, BOMBAY.

SIR,—There are at this moment large building schemes and land reclamation works devised that will demand immense quantities of dressed stones from quarries. I know of no employment so well adapted for convict labour as open quarry-work, both for its healthy character and its certain remunerative return. I should imagine that such work would be highly beneficial, to the minds of prisoners, from its character of complete utility.

With these views I would select a suitable site on the opposite shores of Karanja, near some deep water, bluff headland, from which a small pier or jetty could be run into the sea to facilitate the delivery of stone from tramroad-trucks into boats. The site for confining the convicts should be surrounded by a wall twenty feet high, with three feet broad foundations diminishing to one foot four inches at the summit, with elevated watch-towers at the angles, from which lights would be focussed to light up the top of the wall, so as to make it impossible for any prisoner to scale the walls without detection.

The walls should also embrace the whole quarry site, so that prisoners would not require to be taken beyond them to the scene of their labour.

The site should be so chosen as to admit of the quarters of the prison officers and guards being built on the most elevated ground, so that a small redoubt, armed with a twelve-pounder gun, would command the whole interior of the prison. The quarters of the officers and guards

should have no communication with the prison-yard, other than by a narrow, zig-zag, metal-coated portcullis, self-shutting with a spring lock.

I would try the plan of victualling prisoners on a new system, which, I think, would save much expense to Government, and at the same time be gladly welcomed by the prisoners.

Let the Mint prepare dies, and stamp several thousands of zinc tokens, which should be equivalent to half-pies, pies, and annas. A proper sum of these should be daily issued to each prisoner, in order that he may exchange them for their nominal value in food, such as he may select from licensed vendors. The emulation amongst these latter for the privilege of serving some two or three thousand prisoners, would ensure a good supply of every description of cooked food, bread, bajree, grain, &c. Any prisoner found saving up tokens would forfeit them. The dealers would weekly present the tokens to the prison treasurer, and receive current coin in exchange. To obtain a full measure of work from all prisoners, it would be necessary to have a system of rewards and punishments, which may be fixed after due deliberation, suited to the nature of the work they would be engaged on, viz. quarry-work, stone-dressing, and breaking up into road metalling the quarry scablings.

The manner in which the prisoners' labour would be disposed of, could be managed thus :—stones could be dressed of every description of shapes used in building and flooring, as well as stone-rollers, hand corn-mills, oil mill-stones, mortar-stones, curry-stones, large foundation-stones for machinery, &c. &c. A stock of each of the foregoing could be deposited on the spare ground belonging to Government at Tank Bunder, near the Powder Works. There could be a fixed but moderate value placed on each description of dressed stones, and one clerk would be able to manage the sales, thus any one wanting dressed stones would at once purchase what he wanted, and take them away.

Prisoners could also prepare dressed stones for the Harbour Defence Works to any dimensions wanted, or for any other Government works.

When it is considered that boys of 12 or 14 years of age now obtain four, five, or eight annas a day for the most ordinary description of stone-dressing, some idea may be formed of the profitable nature of this work for prisoners. It is a trade at once healthy (because carried on in the open air), easy to learn, and when acquired and the prisoner released, he carries with his freedom a trade in demand with the public, and on which he may safely depend for his future subsistence.

Hard working prisoners should have certain privileges accorded, such as more nutritious food, the use of tobacco, or be made an inner turnkey, or monitor, &c. &c.*

19th July 1863.

TOM CRINGLE.

A REFRactory JURY.

SIR,—A Hindoo named Ramchunder Crustnajee was tried in the Supreme Court on Saturday last, on two counts :—first, for obtaining

* See the late Dr. Ogilvie's Report to Government thereon.

goods from Messrs. Rogers & Co. under false pretences ; and second, for *an attempt* to obtain goods under false pretences (with varying pretences). I will not go through more of the evidence than is necessary to elucidate the main features of this extraordinary trial.

The prisoner, No. 17 on the Calendar (evidently a sharp, clever fellow, who practises the healing art, but who should " throw physic to the dogs" and turn lawyer), opened the ball by first wanting to challenge all the Europeans on the Jury (!), which was refused ; then, by asking the Judge why he should be tried a second time, he having been found guilty of the crime imputed to him, by Mr. Crawford, the Chief Magistrate, and sentenced to three months' hard labour in the House of Correction. This astounding announcement took every one by surprise. The Judge consulted with the Chief Magistrate, and then announced that Mr. Crawford denied having sentenced the prisoner, &c. &c. However, witness after witness, with the exception of a shrewd sepoy, who saw how the wind was blowing, said he *had* been sentenced. The Chief Magistrate was called to the witness-box by the prisoner, and there admitted that the prisoner had been sentenced as stated, and the case completely disposed of ! The newspaper reports will no doubt give the particulars, embracing the reasons for eventually sending the case to the Supreme Court. This is a question of law, with which, as the Judge very truly remarked, the Jury had nothing to do. We may term this the conclusion of act the first. The next may be called the afterpiece,—entitled, *Killing no Murder*.

It was distinctly proved on the trial that the prisoner had forged the name of a Parsee Doctor, in the Grant Medical College, to a requisition for medicines on the prosecutors. The note was dated from the Grant Medical College. (It may be here stated that the prisoner was formerly a second grade Dresser and Compounder in the Jamsetjee Hospital.) The forged letter in question was sent by the prisoner with his sepoy to obtain the medicines on a Saturday. The sepoy was told by Mr. Kemp, of Rogers and Co., to come on the Monday following, on which day the prisoner *repeated the forgery*, by writing a note as if from Dr. Eduljee Nusserwanjee, requesting the medicines to be sent by his sepoy. The prisoner stated that he verbally told his sepoy to tell Messrs. Rogers and Co. that they were to send the bill with the medicines in charge of their collecting clerk, and he would pay for them. When the prisoner put this question to his own sepoy, the latter confirmed it, by saying that he delivered the message to Mr. Kemp ; but that gentlemen denied having received such a message, and stated that having a suspicion that all was not right, he proposed to the sepoy that his collector should accompany him, to which the sepoy assented. The sepoy and collector, with the medicines, were accordingly despatched in a shigram. On arriving at the prisoner's house, it was stated that he was up-stairs asleep ; the sepoy went to call the prisoner down, the medicines being still in the shigram. When the collector saw the prisoner, and found that he was not the person he had represented himself to be, he seized him and called out " Thief! thief!" or as another witness said, " Sepoy ! Sepoy !" The prisoner here pleaded that

he told the collector he was willing to pay for the goods, but he did not offer the money. The collector gave him into custody. Now, why the prisoner was not indicted for forgery I cannot imagine. If he had used the name of some ideal Jones, Smith, or Robinson, the case might not have borne such a dark complexion; but here was the damning evidence against him in court, in the shape of two notes, wherein he forged the name of Eduljee Nusserwanjee, a doctor in the Grant Medical College, in order to obtain medicines, for which he had, a few days previously, asked Messrs. Rogers and Co. to give him credit, but had been refused. This is a rough but true sketch of the case up to the time of the Judge addressing the Jury. Before touching on the address from the Bench to the Jury, let me say a few words as to the dodges of rogues to get goods from tradesmen into their possession. In nine cases out of ten the tradesman is invited by the rogue to send the goods with a bill, accompanied by a shopman; they know but too well that the goods would not otherwise be sent. But the devil tempers this difficult ordeal by endowing his children with the cunning to defeat it. Who has forgotten the recent London Police case, where Mamma, after selecting no end of silks and finery, orders them to be sent *home*? Behold them spread out on the carpet. In an adjoining bedroom a hacking, consumptive cough is heard. Might Mamma show her dear suffering daughter the treasures? Oh, of course. Alas! Mamma, daughter, silk, and cough depart by the back-stairs, and are seen no more! An exactly similar trick was played on a Mogul a few months since in Bombay. He was invited to bring his shawls or jewels (I forget which) to ROGUE CASTLE. Might the intended purchaser show them to the ladies in the next room? Again is this old trick played as above related.

When a man forges a bill, or cheque, and he is detected in the act of uttering it, if poor, does he not say "Oh, pray forgive me!"—if rich, and were he to say "Oh, I'll pay!" would he not be laughed at as trying to disarm justice when his leg was fast in the trap for criminal offence?

Yet the Judge told the Jury that they were to forget these two forgeries, and only consider whether the *intention* of the prisoner was to defraud the prosecutors by getting the medicines in another man's name. Now, in this case, how could the Jury divine what the prisoner's *intentions* were, apart from his proven acts? And if he says that his *intentions* were honest, are his assertions to be believed because he said "I'll pay," when detected in the crime for which he was tried, and of which the jury unhesitatingly found him guilty? If this doctrine is to become law, every rogue in Bombay will make a trial to obtain goods by forging another man's name to obtain them on false pretences; and, if detected, fall back on the accommodating doctrine of hell's paving bricks, good intentions! Is it not often found in criminal cases that murder was the *intention* of the prisoner? but they do not hang him for the *intention*. In nearly all cases of embezzlement in our London Police Courts (some of them sad enough to claim the tear of PITY, rather than the stern award of JUSTICE), do not the defaulters in nearly every case say "My *intentions* were honest; I intended to make up the sum when my shares in the Great Diddlesex Junction should be at premium?"

In the case of the prisoner, I see only the footsteps of a swindler, until confronted with the bill collector of Messrs. Rogers, when being detected as the forger of two notes to obtain goods on false pretences, he says "I'll pay." I think that all right-minded men will say that Messrs. Rogers & Co. did right in prosecuting this man, and that the jury did their duty in finding him guilty. In fact, the whole of the jury in one minute's consultation, without quitting their seats, found a verdict of guilty ; except the only Hindoo member of it, who, to judge by the tough manner in which he held out for five hours, with the prospect of being shut up fasting until the following Monday, was sensibly affected by, and readily converted to, the doctrine of *intentions* in criminal cases, as delivered from the Bench.

August, 1860.

TOM CRINGLE.

THE HOPELY TRAGEDY—LESSON FOR PARENTS AND SCHOOLMASTERS.

SIR,—In the "Home Extracts" in the *Times* and *Standard* of this date is a report of the trial of Mr. Hopley for the manslaughter of the boy Cancellor, aged 15 or 16 years.

This should be read by all parents, and others having care of children, as a beacon-warning against forcing the dull intellect of boyhood when manifestly existent. In the case referred to, we learn that a whole circle of apparently clever men knew that the poor lad had even the outward appearance of having water on the brain, such as was revealed by the *post mortem* examination ; and in lieu of sending him to a sharp schoolmaster, his friends would have acted wisely to have had a consultation of physicians, who, if they had known their duty, would have prescribed unlimited rambling in the woods and forests, or a trip to Australia and back, paid with the £180 his shortsighted parents so foolishly and fatally employed to keep him at school.

It is said that dear Sir Walter Scott and Byron were both what are called intellectually dull boys at 14 years of age. If so what a lesson for mankind to study ! I do not believe in the opinion formed by those who think a boy's intellect is not so bright as it should be, because they are not of that modern hot-house raised genius, who become learned mathematicians, as well as classical scholars, by the time they are twenty years old ; have forgotten all they learnt when they reach thirty ; at forty are fast verging into the "lean and slipp'd pantaloons," and have dotard written on every lineament of their features at fifty.

Were I a despot I would not allow any child to go to school until he had attained his twelfth year. Elementary training could be learnt at leisure. And, where attainable, music should form the chief instruction of childhood. Music tends to unfold the faculties of a child without taxing them too severely. Any task which requires physical with mental effort, is more easily mastered than when the effort is wholly mental. Any one who has studied the minds of children will have noticed their extreme fondness for music at a time when they turn with

disgust from the hateful primer. Thus, in lieu of children being taught an art at once gratifying to their taste and exciting to their imaginations, this delightful science is left till they are either too old or have not time to acquire it. The modern educationists are so impatient of nature, that they will not allow the wise old dame to build up her healthy structure of bones, muscles, and brain on which they are so wistfully eager to found their secondary, poor little A B C. How often do we see the "wild one" of the family running away to sea from such unwise treatment, as if nature herself was leading him away from his destroyers. Anon, he turns up a millionaire in wealth, and the best physical chap of the family.

I am intimately acquainted with a man who, when a boy of twelve years old, could learn nothing but bird-nesting, boat-sculling, harnessing his playmates, and driving them as terrible champing steeds most difficult to manage. Successive schoolmasters just managed to give him ~~an~~ insight into the use of the alpha of literature, when a daring dominie undertook the task of thrashing a-b ab, into his numskull. The boy gave leg bail, "ran away to sea" at twelve years old, at sixteen he evinced a liking for books, which grew on him till he educated himself. I saw him two years ago in England hale and hearty, aged 51, with a keen, clear intellect, full of spring and elasticity, at a time when early cultured youth become very shady in their upper works.

A word for the offending Mr. Hopley. I have tried hard to think this man an inhuman brute, but I cannot. He was zealously foolish in thinking he could kindle the intellect of the boy, when nature had denied the sacred spark. With the sanction of the father to inflict corporal punishment, he commenced no doubt with temper and prudence; but as the false idea grew on him that the lad *could* learn if he would, he resorted to still stronger coercive means, until his zealous passion for improving the boy's mind led him step by step into a whirlwind of fury which nothing could justify. But even in this state, when cool reason had been dethroned, we see traces of a good, though misguided man peeping out, as may be gathered by reading the trial.

I think that Mr. Howard would rejoice exceedingly if he could enlist the services of a dozen Hopleys for the schools of this presidency. A merely lazy, brutal schoolmaster, when he had put on his evening slippers after the fatigues of the day, would not have gone into the pupil's room to teach Chancellor his yet unlearned lesson. Yet Hopley did this, and prayed with the boy in the hope of softening his stubborn heart (not thinking, blind moles that most of us are! that nature had denied what he expected to attain). Thus the sad tragedy went on—Ignorance battling with Ignorance, till some tender cord snapped asunder; the boy wept on the glad bosom of his master, said the before-hidden lesson, laid down, and died.

My chief motive for troubling you with this long letter is to deprecate the existing fashion of sending children to school at a tender age, where their physical development is retarded by a vitiated atmosphere caused by bad ventilation. We breed the horse for his physical qualities, and we might with as much reason ride a six months' colt a twenty-mile stage, as

expect vigour from the brain of a child at a time when nature is mindful only to build up the wonderful temple in which to enshrine godlike reason,—the distinctive gift to man by his all-bountiful Father in heaven.

Bombay, 7th September, 1860.

TOM CRINGLE.

SIGHTS FOR BOYS.

SIR.—A Detachment of Boys from the Byculla Schools, accompanied by their master and pastor, the Rev. J. J. Farnham, visited the workshops of the G. I. P. Railway at Byculla by permission.

There were many things seen which both delighted and astonished them :—the powerful Steam Hammer moulding large masses of iron, at the will of the workman, as if it were dough or putty ; Ribbon Saws, giving an up and down cut at the rate of 120 feet per second. A Planing Machine drew forth unqualified praise for producing a wood shaving 15 feet long. There were besides circular saws ripping through timber with a force and energy delightful to behold ;—Mortising, Drilling, Boring, and Grooving Machines filled up the busy picture. The boys appeared to look with very grave respect on the engine, which gave power to all these mechanical wonders they had witnessed. The engine in question, is no other than our old friend the *Falkland*, once a very *fast* fellow ; but now, seated on a wooden chair, goes at a more sober pace, and is equally useful as in his earlier efforts in the cause of civilization. Our young visitors were also much pleased with the *ripping* pace of the Log Saw Mill, which chanting its bustling up and down song, cuts up a large log of teak into 20 planks, if necessary, in as many minutes. On through the machine shop, where the Punching and Shearing Machine gave them iron “dumps,” punched from $\frac{3}{4}$ -inch iron plates, or a slip sheared off from the same. Here is also plenty to see ; Rolling Machines to give a circular form to the thickest plate iron ; Planing Machines working away like good boys, without any one to look after them,—self-shifting their iron arms about like magic. On to the fitting shop, where are locomotives in all stages of forwardness—some just caught up from grass in the sidings about Mazagon Bridge, with coatings not at all in keeping with their usual smart appearance. Now are busy men fitting on strange iron harness for their coming work. The most active and busy of these, a fine English boy, doing an intelligent man’s work, should have formed an emulation lesson for the young visitors, as he scarcely exceeded the age of the eldest, although he had the sole charge of fitting out the iron steeds. Let us hope they imitated honest Cuttle, and made a note of it. We turn under an arch, and there we are in what we may term the tailor’s shop. Our strong, rough friend, the locomotive, here gets a beautiful coat of green, edged with many other colours, besides getting a golden number, by which his future deeds will be recorded. His worst sin is *gluttony*. He often drinks till he *bursts*, but to swallow more than 28 lbs. of coke for each mile he

travels is deemed a very grave offence indeed. He may commit incendiaryism and homicide by misadventure, and scarce a remark is made to him, but suicide and gluttony are unpardonable crimes.

After inspecting the smith's forges, tyre forge foundry, &c., they finished off with the Store Department, where are temples dedicated to ORDER and NEATNESS, and where is the grand furnishing museum of 1,234 miles of railway.

Poorundhur, hide thy head in thy misty night-cap! Couldst thou have given them a gratifying sight like this they have just enjoyed had they been located in thy cloud-capped summit?

Bombay, 10th October 1860.

TOM CRINGLE.

MUSCLE VERSUS MONEY.

Sir,—In the good old times, when honest Koompanee Jehan ruled this land, we had our pleasures and holiday sights with quite as full measure as at present, with no Stamp or Income Tax to flit like unbidden guests across the mind and mar the spirit of enjoyment. In those days of old, we had our line of battle ship launches at night, with myriad lights of every colour to give enchantment to the scene. At other times, some Rajah would form a picturesque encampment on the Esplanade with elephants, camels, and native horse, armed with spear and matchlock. In 1822 we had a party of Persians who showed us in first-rate style the sport of the Maidan in throwing the 'd'jereed. This beautiful, exciting, and manly sport used to be repeated often during their stay in Bombay.

The knowledge of this fact induces me to ask what are our native youth about that they do not get up this truly noble game in lieu of immuring themselves at home, tied to their wives' apron strings, or taking passive exercise in a *fast* buggy? The fathers of the class I have in view would surely sooner see their sons grow up to be fine manly fellows, with the glow of health mounting to their cheeks; their muscular development improved, their mental improvement would assuredly follow. At present they get too much school for the mental strength they have to carry its teachings: these are the "yearlings," as we may call them. At sixteen they are expected to acquire an enduring love for the almighty rupee. Thus with school training in excess, early marriages, and no muscular exercise, the brain never can gain strength to quire strong reasoning faculties; nature, in despair, arms her weakly children with cunning, and after clothing their little pipe-stem bones with fat, smuggles them into the busy stage of life as *men*! Let not my native friends think this is written in race-scorn prejudice. No such thing. I wish to see their sons imbibe a love for those rough healthy sports, the like of which, in a severer degree, gave a handful of Spartans the power and courage to stem a nation in arms against them.

Neither let native gentlemen think that the mental power, and high gifts of reason they may see in Europeans around them, are the inheritance of high breeding, nurtured in idleness. Not a bit of it. The primal

muscularity of their frames and brains were developed in their honest progenitors as coal-porters, blacksmiths, navvies, sailors, farmers, &c. &c. The present holders of stock in the Mental Bank (who don't take muscular exercise) *sell out reason scrip daily*, and their children would be but a weak reflex of the father, did they not re-gather the mental stamina thus lost, by a severe course of muscular training as children and youth. Our wise men of the West are just now awakening to this important truth. They see that wisdom and mental energy never abide in a family whose youth do not re-accumulate, by muscular exercise, what the parents have been forced to expend as the fame and bread-winners of the family.

Do you deny this wise and beneficent law of nature as here set forth? You cannot. I defy you to do it. Look at the sensual-harem-tied Mussulman. As a race they are melting away from off the face of the earth, like snow from the summit of Lebanon. And why? Because they work not, as did their hardy fathers who came forth from the steppes of Tartary, an army of mounted shepherds to conquer the world. They have spent their mental wealth in idleness, and must now sink to the bottom;—would have sunk long ago, only for the Christian forbearance of those they once persecuted.

Are these not a sufficient excuse for my calling attention to nature's abiding law, that without work we sink as human dregs to the bottom? Up then, and arm your sons for the mimic battle. We think, grey beard, thine old eyes would more gladly light up with proud pleasure to see thy son the hero of the Maidan, the winner of its highest honours than to know that he had achieved the in-gathering of rupees, not wanted in thy well-filled coffers.

Bombay, 16th October 1869.

TOM CRINGLE.

FIRE! FIRE!

SIR,—What are the Bombay Fire Insurance Offices about, that they have taken no steps to organize a good fire-water service from Vehar pipes now laid down all over the Fort streets? If they place dependence on the weak fire-engines stationed in the Fort they are resting on a broken reed. If we except Edinburgh, there are few cities in the world with taller houses than are in the Fort, and yet in case of fire there is not an engine there capable of delivering a one-inch jet of water higher than some 40 feet, whereas the Vehar main-pressure with the same diameter would deliver at 60 or 70 feet, and with a three-quarter-inch delivery pipe would reach to one hundred feet high. With these important facts in view, would it not be well to fit an ample supply of stand-cocks throughout the Fort, and in the more densely-packed parts of the native town, from which to draw a full service of water in case of fire? Were this plan adopted, all that would be wanted would be a few hose reels mounted on a pair of light wheels and axle, with a short handle to propel and guide them;—thus, in the event of a fire breaking out, two of these, each carrying 200 feet

of fire-hose, could be trundled like wheelbarrows to the scene of action to the nearest service-pipe, the hose run off the revolving reel in the direction and to the extent required, and the connection with the water-pipe made in less time than I have taken to pen the suggestion. This also should be done at two or more other stand-cocks adjacent to the fire, when such a vast body of water may be thrown on the enemy as would quickly extinguish it. If those most interested in this important question have any doubts as to the superiority of the Vehar Water Service over the feeble fire-engines stationed in the Fort, let them be tried any day near the Bombay Green, both having the same bore of delivery nozzle.

It may be objected that the Vehar pipe may burst just at the moment when its services may be most needed for extinguishing fires ; this is true, but let us hope that the Vehar pipes which may have had inherent defects have been replaced by sound ones. Nevertheless I would not leave the Fort wholly unprovided in such a crisis. But do not let us despise on a *sham*, such as the penny squirts at the Bum-khana ; let these be stationed in the native town where the houses are low, and within the capacity of their power, and replace them in the Fort by two of the most powerful fire-engines that are made and used in London. To move these with despatch, let there be kept two sets of collars, with traces and pole straps, and on an alarm of fire the native mounted police would gallop to the engine-house, slip the collars over two pairs of the horses' heads, attach them to the engines, jump into their saddles, whilst the firemen would jump on to the riding seats of the engine, and go into action with all the dash of a charge of cavalry. Nearly all the police horses are old-gun troopers, if I mistake not, and would rather enjoy the sport than not.

I have barely given an outline for organising a good and *dependable* fire-engine service, and what I chiefly contend for is to do away with so many useless weak engines, and keep only four of the powerful ones I have recommended for the whole service of the island. One even would be enough for the Fort and three for the native town, and these to be used only in case the Vehar main failed.

With numerous stand-cocks fixed to the water-pipes, I do not see any reason why the hot stifling dust in the Fort should not be kept down with a small staff of men using short lengths of hose and rose spreaders ; this need not entail any extra expense on the municipal funds. The merchant sweats at his desk from the close stifling heat in the Fort. The shopkeeper groans over his goods spoilt from the dust penetrating his choicest show cases and cupboards, and who shall say that they do not owe fevers or dysentery to the same insidious cause, composed as it is of all the disgusting elements which a crowded city can compound—including even the scales from the leper as he uses his digital currycombs, basking in the sun.

Are we never to mend the aspect of the miserable Bombay Green, when ten rupees from three hundred and fifty good men would make it a miniature paradise ? Let the money be raised, and the writer

will engage to realize a beauty in this ugly spot that shall redeem our names from the parsimonious reproach that this Bombay Green testifies to.

Bombay, 31st December 1860.

TOM CRINGLE.

INDIAN FARMING.

SIR.—It must be admitted by all men of whatever caste or creed that there is less *personal* farming by the monied classes in Western India than in any semi-civilised country in the world. Why is this? There does not appear to be any caste obstacle in the way, as men of all classes who own large houses with compounds attached grow vegetables for sale, as well as fruit, &c. Is it because they object to remove out of Bombay? Or is it that the large body of petty capitalists can realise a better return for their money by jobbing in shares, buying auction goods to re-sell, and a hundred other modes of getting money? These dealings may be legitimate, and no doubt are, but the majority constitute a sort of commercial privateering, whereby one-half lives on the ruin of others, the successful bargainer himself coming to the dogs in turn.

Bombay owes a deep debt of gratitude to our worthy Parsee Knight, Sir Jamsetjee Jejeebhoy, for his liberality, not only in assisting the poor in every possible shape, but also for the advancement of science. Yet I doubt whether anything he has yet done (except relieving calamitous distress) would redound so much to his honour, or would so much promote the general welfare of the natives of all classes, as were he to start a model-farm on improved principles, suited to the climate and customs of this large and fertile country, where a scratch on the soil, with the means of irrigating it, would yield all the bounties of nature, which furnish the basis of all commercial dealings. In civilised countries farming has been respected as one of the most honorable employments that man can engage in. There is scarce a ducal house in England but what farms a portion of its lands, or that fails to contest for its annual prizes. Mr. Mechi, who at one time was famous only for unrivalled razor strops, is now equally or more famous as being the most skilful and enterprising farmer in the world. He is now Sheriff of London, and there is little doubt that he attained that dignity by ploughing a golden path to it.

One of our finest ancient poets has dignified the farmer's calling in unrivalled strains. The Emperor of China annually holds the plough stilts to confer dignity on the cultivator of the soil. In England our richest and most ancient families farm their lands, and live on them with the dignity of princes. Even the husband of England's queen is a farmer. It is left for this country to have for its farmers the wretched Konbee with scarcely a covering to his body, the greedy money-lender clutching his throat for nearly every pie he can wring out of the soil—till in despair the wretch becomes indifferent, lazy, stupid, and lost to all improving methods for bettering his condition.

I have travelled a great deal in India in what may be called her rural districts, and nearly everywhere have I seen the Indian farmer calling on Jupiter for help, when he should have helped himself. Let any impartial traveller deny, if he can, that when the wretched Konbee's scanty crop is gathered, he sits idling at home, more like an aged crone than a man who has work to do. How many bends in the river near his home, with deep water in them all the year round,—does he attempt to lift this water with the simple Persian wheel, the materials for which are growing not ten feet from the wretched dirty village in which is situated the equally wretched habitation that he is content to live in? If his land is situated too high above water, which would turn his land to gold, cannot he lift it twice or even thrice, as did, and I suppose do, the Egyptian tillers of the soil?

He has not now the fear of the thieving, murderous Pindaree before him, ready to swallow the fruits of his labour, nor the locust march of the armies of his former native rulers, whom it is the modern fashion to clothe with the virtues of an Alfred. Enough of this; let me approach to a description, however feeble, of the farm I would see in progress.

Many of my readers, who have travelled to Campoolee by rail, must have noticed the beautiful open valley of the Oolassa, along which the line runs. It is to this, at or near Budlapoor, that I would particularly draw attention. There the air is always cool and refreshing, however hot at Bombay or further on in the neighbourhood of the Ghauts. This refreshing coolness is, no doubt, owing to the direction given to the air currents by the Matheran range, and the near neighbourhood of the river Oolassa. On the banks of this river there are extensive tracts of fertile level land, and in the river bed there are deep pools of water at the bends of the river, which are never dry. It is near one of these bends I would build a good substantial farm-house, and fence off the land with timber to be had in the woods close by. All materials not on the spot, could be had from Bombay by rail. I hope I shall not startle my readers by saying that my next erection should be a five-horse steam engine, with whose power I would lift my irrigating water from the river, thresh and winnow corn, cut up rich, milk-producing food for cows, express the oil from my linseed, and the saccharine juice from my fine crop of sugarcane, compress *made hay* for the Bombay shipping, and the wealthy, who would buy it for their horses. The railway will want firewood as long it is to be had cheaper than coal. I could haul this firewood from the jungles close by with my own cattle as an odd job, and place it beside my slave the steam-engine, who would cross-cut it and split it ready for market, at a profit of Rs. 3 per ton, and I'm sure it would work up ten or even twenty tons a day. The railway will receive it at the station close by for Rs. 4 per ton. A sharp, obtuse-shaped splitter, worked by a piston rod and piston, in a minute cylinder, on the same principle as the steam-hammer, would split timber faster than hands could feed it; and, what is more, it would live on what it worked on. The writer of this is now buying firewood in the locality of Budlapoor at the rate quoted; and as it is a want that will not die, it may be safely

reckoned on to pay the expenses of an engine, and yield a handsome profit, irrespective of its employment to raise water.

But it is as a market gardener that I think the greatest profits are to be realized. Our market gardeners at home plant their six or seven acres of cabbages, to sell to the dealers at $\frac{1}{2}d.$ each, and realize great profits. But when I assure the reader that I this day paid 3 annas = $4\frac{1}{2}d.$ for a, by no means fine, cabbage, I don't think there can be many doubts as to profits. By St. Paxton, it is enough to tempt every Englishman in Bombay to turn farmer, when profits like these are in view. Besides which the wealthy and great would eat none but model-farm butter, crack none but model-farm eggs. We are all in want of a better class of vegetables, of a greater variety, and at a cheaper rate. If my farmer should find any idle time on his hands, with his twenty acres of land covered with brilliant, clean crops, his farmyard and buildings in good order, manure well conserved in chunam-lined and covered-in pits, everything neat and tidy, no gaps in fences, and nothing to do as an *odd job*,—then let him come to me, and I'll soon find him one, and a profitable one too. Bombay has not a decent tile to cover her house tops, and is in want of well-shaped hard bricks, both for private house-building and public works. England sells machines which will manufacture bricks or tiles out of the fine clay, which is to be found on the banks of all our rivers, with not a stone in it the size of a bee's knee. My model-farm will not be able to supply the demand which will be made on it for fruit, vegetables, milk, eggs, butter, and poultry, which, by means of the railway at his elbow, can be sent to Khandalla, Matheran, and Bombay. If it should be undertaken by an intelligent native with capital, here are dozens of gentlemen who understand farming sufficiently to give him valuable advice. What he must guard against is a slovenly system of farming. If he falls into this, nothing would succeed well. Let him only keep his house and farm in first-rate condition, and it would become a sight for all, from the Governor to the humblest in the land. In fact, I know nothing that would give a native a more prominent or honorable position; he would be the observed of all observers.

Yet this healthy and lucrative business is let go a-begging, whilst hundreds of native "millionaires" allow their sons to go hunting after some miserable head-writer's place, or hungering after some insignificant secretaryship, while each has the means within his reach of placing the idol of his affections on the very pinnacle of honorable notice, with a mine of gold under his feet.

Most worthy Parsee Knight, you have taught the native rich how to be munificent, let me hope that you will teach the native poor how to farm. Our educated youth of Bombay may follow the example, and learn more independence than to keep up the eternal horse-leech cry to Government of give, give,—because, forsooth, they have wisely chosen to rescue themselves from an ignorant barbarism by learning the A B C of an instructing literature.

TOM CRINGLE.

RESTRICTIONS IN THE ACQUIREMENT OF LAND.

SIR,—The battle cry of the Press, when advocating the imposition of Imperial rule for India, was that restrictions in the acquirement of land were to cease,—British capital was to flow into impoverished India from plethoric British purses to make docks and piers, establish manufactures, &c., &c. Farmer Stiles was to leave his turnips in Berkshire, and come to India and grow cotton,—whole colonies of British families were to have been located in Candeish to win the soil to the growth of cotton, that the evil Government of John Company had allowed to lapse into a hunting lair for the tiger. Have any of these dreams of the Press been realized? Is the Missionary more successful? Have the offers of capitalists been accepted to construct bunders, as witness the prosecution of Wm. Nicol and Co. on the —— for landing cotton (which Manchester is so loudly clamouring for) on the crowded Apollo Bunder? Where else can they land it? Here is the Monsoon nearly on us, with thousands of tons of cotton seeking a landing place before the precious fibre is spoilt by the wet. But have not our rulers been warned year after year of the dire want of this port of facilities for conducting commercial operations. The leading partners of the very firm prosecuted for obstructing the Apollo Bunder with their cotton bales, owing to the want of adequate bunder space, were (by a strange coincidence) the gentlemen who offered to find the capital, and in two years add six-fold to the bunder accommodation of this port. But no, a grand twenty-million-sterling, impracticable scheme from the brain of Mr. Malet, a member of Council, stood, and *stands* like a lion (dog in the manger?) in the path of improvement. Here is your British capitalist who brings his cornucopia of means to build us what we so sorely want, but he asks permission in vain for leave to benefit this country with the British capital that you, Mr. Editor, are nearly daily asking for. He is told, Don't disturb us, we are planning a railway to the moon to carry green cheeses. It is but fair to remark that the offer referred to was made before the present Governor's advent. But I can give a more recent case. A gentleman I know applied five months ago for a piece of waste ground at Tank Bunder, whereon to erect a saw mill with machinery of every variety for converting wood; altogether embracing an investment of some £10,000. This grant could have been easily effected in five days in place of five months. The land asked for is separated from salt pans by a raised stone embankment, through which latter the owner has one of many sluices for the admission of sea-water to the salt-pans. The Mussulman owner of the pans, no doubt having learnt that my friend was after this piece of ground, draws a *pencil mark* embracing nearly all the intended saw mill site, threw up a dyke to mark his claim, and unblushingly tells the Collector, "This land within the pencil mark is mine." He failed to show the officers of the Crown that he had ever exercised manorial rights over the land in question, by exacting fees for allowing timber to be deposited on it as has been the custom. He merely draws sea-water through a sluice, and my friend offered spontaneously to secure to him this supply by constructing a culvert equal in area to his sluice gate. The Collector admits that the land does not belong to this *squatter* claimant, but

if given to my friend for a mill site he might be troubled with "a defective title." My friend replies that he is willing to take the land, and that he will tell his lawyer to ask the squatter for his title to the land, of which he has not the ghost of a fragment to show. My friend would take care to secure to him his supply of sea-water and laugh at his beard. In the meantime, £4,000 worth of machinery is shipped, and my friend is told he can't have the ground. Now, does it require two grains of sense to foretell that this squatter will wait till Mr. Spooner leaves the service, and Mr. Jenkins goes on leave to England, when he will assert his right to this land, with the clinching argument that the Collector wanted to take his land from him before, and gave it to some giaour who wanted to erect some foolish scheme for cutting and shaping wood; but he, the Collector, no doubt knew that he was the true owner of the land, and refused to let him have it.

The question is for the Government to ask their Collector, does the land in question belong to the salt-pan owner; yes, or no?

If yes, let him have it by all means; and if not, give it to the British capitalist who, by investing money in this scheme, will materially benefit the whole of Western India by the conversion of timber by a hundred different processes, which have not yet been introduced as a civilizing agent into this country. Here has your British capitalist, No. 2, been defeated in seeking investment for what you are eternally writing about, "British capital for impoverished India." You may say, "Why don't your friend get another piece of ground?" True, oh wise man! But if he goes further north than Tank Bunder, he ruins his prospects by getting beyond *buggy range*. If he proposes for a site on the south side of the Bunder, the agent for Gunpowder says he will "blow him to the Devil." Yet further south holders of land will not part with it till they see whether the moon railway will not beneficially affect their property. Then, again, timber waiting for the saw can't lay beating on an exposed beach, and it is absolutely necessary that a saw-mill should have a sea-water communication, otherwise all their profits will go in cart hire and haulage. It is equally essential that the mill, with its valuable machinery, large stock of seasoning timber, and its extensive building, be kept clear of neighbours likely to create a fire. The piece of ground south embraced all these advantages, and is utterly waste ground covered wholly by spring tides, and from which Government have not hitherto derived any revenue; yet, nevertheless, the "British Capitalist" is told that he cannot have this piece of ground, as it will grieve the squatter, who would, had he the courage and ability three years ago, have cut the throats of both rulers and "British Capitalist."

Bombay, 9th May 1861.

TOM CRINGLE.

NEW WET DOCK SCHEME.

WITH A PLAN.

IN the year 1857 I published a pamphlet in support of a stone Pier in the harbour of Bombay as being superior to Wet Docks, the construction

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of which was then contemplated on the margin of the Colaba shore. My chief objections were confined to the chances of incendiarism among the shipping, and the exposed position of the proposed Docks to shelling from an enemy's fleet, which would inevitably sacrifice every Merchant ship in the Docks.

Late notices in the public papers state that the Merchants of Bombay have signed a Memorial in favour of Wet Docks, which induces me to publish a scheme for their construction that will be free from the objections I before advanced against them, and where the intended site will harmonize entirely with the two large systems of railway which run into Bombay; it will also utilise an immense area of this island now lying unproductive, which should in itself be a sufficient inducement to prosecute this scheme to a successful issue. The site I propose for Wet Docks is the Flats.

If objection to this scheme be raised on the score of the Docks being a long way from the Colaba Presses, I reply, make an extension of the Railway from Boree Bunder to the Colaba Presses over the Esplanade, and the pressed cotton bales may then be brought to the Docks, and be tilted from the waggons down a shoot into the ship's hold.

It is hardly necessary for me to say that, for years past, I have been intimately acquainted with the shores of Bombay Harbour, as well as the road traffic of the Fort and of the rest of the island. I am also well acquainted with the site of the proposed Wet Docks promoted by Admiral Sir Henry Leeke, which is quite open to assault from an enemy's fleet; and owing to their close proximity to the houses in the Fort, to say nothing of a like nearness to the Mint, they would especially draw the fire of an enemy, who would probably spare the place, were not the incentive too great in being able to destroy so large a Merchant fleet at a blow.

Equal objections exist in the crowded state of the Fort in the near neighbourhood of the site of the proposed Docks in Moody Bay, which site, if ever so suitable in other respects, would prove altogether worthless from this cause alone. If this be true now, what will it be in a very few years hence, when our Railways will bring in quarter-hourly Trains of Merchandise from every part of India? Nothing is so necessary as to provide for the future wants of commerce when planning the construction of Docks or Railway, and when it is considered that the Moody Bay Docks will have to be wholly created from a bare low beach, at an expense of about a *million sterling*, and then be subject to the fire of the first fleet strong enough to attack us, I maintain that the site and crowded Fort will be unworthy of the Docks when made, to say nothing of the difficulty and expense of making docks in deep water, and the danger of their silting up when made. The approach to the proposed Docks is over foul ground; and again, the great expense to be incurred in reclaiming land from the sea and building thereon suitable termini for two gigantic systems of Railway, whose total mileage will be extended to the enormous distance of 2,200 miles, and whose chief traffic will consist of unpressed cotton and seeds, should make us pause before bringing so bulky and increasing a traffic by rail to such a con-

fined neighbourhood as the Fort. The above considerations, as compared with the site on the Flats which I now for the first time propose, should, at least, invite attention ; when, if the suggested scheme is not sound, it is a very easy matter to consign it to the waste paper basket. With the foregoing remarks I will now proceed to lay my Scheme before the public.

When the pre-Adamite fishermen of Bombay spread their nets to dry on the summits of Malabar, Love Grove, Belvidere, and Nowrojee Quarry hills, there ran a deep sea-channel across this Island where the above-mentioned hills break down to the surrounding levels. Later irruptions of trap-rock partially dammed up the termination of this channel (more immediately under consideration), near the Byculla Tank, on the one side, and in Belvidere Bay on the other. The intermediate space on which the Great Indian Peninsula Railway runs and the workshops are built, extending to a considerable distance on each side, is a depth of 30 feet, or more, of pure alluvial clay, totally devoid of rock or stone. I dwell especially on this most important fact, as it has a material bearing on the success of my scheme.

By a reference to the accompanying Map it will be seen that the entrance to the Dock Canal is north of Cross Island. It is at the entrance I would place the canal gates, so as not to admit silt. From this entrance up to the Customs' Chowkey at Warree Bunder, the Canal would traverse for a distance of 1,200 yards over soft trap-rock, which formation will prove advantageous, in so far as the necessity for retaining-walls will be avoided, and in the facilities it will afford in keeping the works dry during construction, besides providing that great desideratum,—a fine foundation for the canal gates. Westward of the Chowkee commences the alluvium, through which the Canal would pass,—about fifty feet to the north of the Mazagon-railway bridge. There is not a great deal of traffic on this part of the Mazagon Road ; I would therefore remove the bridge and substitute a level-crossing, just beyond which the Canal would intersect. (I will deal with canal bridges further on.) The course of the Canal, after passing the Mazagon Road, will be to the left or south of Barr's House ; then on, through Tar-Warree, to the right of the Portuguese Chapel, across Nesbit Lane, and through the south, west angle of the Clarendon Hotel compound ; through vegetable ground on to the right of the house lately occupied by Mr. Spooner, across the Parell Road, through the angle of the compound opposite the end of Love Lane. The Canal then deposits its proud freight on the waters of the Wet Docks, which will extend from about 100 yards north of Byculla Bridge up to the Phipp's Oart, or 1,200 yards long and 100 yards broad. The course of the Canal thus detailed is especially felicitous in its avoidance of house property, although compensation for deterioration of one or two houses will, no doubt, be necessary ; yet the singular absence of such property in the Canal route is an important reason for recommending this project.

I have named twelve hundred yards as the length, and only one hundred as the breadth, as, where railways are concerned, *length* of ground is of the greatest moment. One hundred yards will give space for five ships abreast with

a lane in the middle for warping ships from end to end of the Docks. There is one important advantage in the site chosen, which is, that it will only be necessary to open the *length* of the Dock as necessity demands. The side retaining-walls will have to be built (most probably for the upper ten or twelve feet only), but the North end of the Dock may always be left open, and a mud bed made, on which a very leaky ship would be only too glad to rest her weary bones and discharge cargo.

But we have got our Wet Dock on the present site of the Railway just north of the Byculla Bridge. True, but I propose to remove the bridge fifty yards further south-west on the Parell Road, so as to straighten the curve opposite the Railway Store House, and thus enable the line to run over the south-west angle of the Byculla Tank on to the Flats, parallel with the Wet Docks. The Byculla Station even now is crowded for the work it has to do; and its abandonment and the erection of a well-laid out and spacious Station on the Flats, where its Up and Down traffic could be worked on opposite sides, and not as at present all jumbled together, would only forestall by a very few years a positive want, which *must* eventually be supplied.

The old station, being situated so near the Docks, would realize more than it cost as a Dock warehouse, as the present line would remain in connection with the Docks, and the one station need not be abandoned one hour before the new one is ready for occupation. The excavation of the Docks would level up a large expanse of the adjoining low land, including the raised level for the diverted portion of the Railway. This could all be done without causing the traffic of the Railway to be delayed an hour, which is an important consideration.

The Canal entrance would be provided with a double set of wrought-iron gates; and being situated under the lee of Canal Entrance. Cross Island, during the monsoon, the sea would always be smooth. It is not necessary that the entrance of the Canal be in water deep enough to admit a ship at low water, as the ingress and egress of ships is not of such frequency as to desire it, to say nothing of the increase in the cost of construction by making the bed of the Canal and Docks some 12 feet deeper. Thus, with 24 feet water on, the entrance-gates' sill (ordinary tides) should form the datum level for the Canal and Dock floors.

I now proceed to notice the Canal Bridges, of which two only would be required—one at Mazagon Road, the other at Parell Road.

I propose that the Dock Canal shall be 60 feet broad, with a depth of water of 24 feet. At each of the roads where the Canal is to be crossed on bridges, I propose that these bridges be iron-bottom barges, with top sides of teak, to afford a roadway of 30 feet, with railed-off side-paths of four feet on each side. When a ship is to pass, the bridge is to be uncoupled from one side and hauled into a recess on the other. The level of these bridges to the roadway can be maintained to an inch by either letting in water to the hold or by pumping it out. At the junction of the Canal in Nesbit Lane, a road will be made north-west into

Love Lane, and from Love Lane into Mount Road, by means of which the Parell Road can be reached without crossing the Canal.

It is in this portion of the works that the clay from the alluvial gully Constructing the Canal will make the construction an easy matter ; from the Harbour. this part to Belvidere is daily flooded by the tide over a distance of 1,200 yards. Clay from the Canal cutting, west of the Mazagon Road, will be run out on to broad embankments on each side of the intended course of the Canal, as well as at its entrance from the Harbour, which will be securely coffer-dammed by means of piles and good clay.

Thus, as soon as the entrance-gates are up, the only difficult portion of the whole work will have been conquered ; the remainder will be like a railway cutting, and the retaining-walls of the Docks and Canal will be executed under well-ascertained conditions, and the spoil will go towards reclaiming a large section of the land marked on the Map as to be reclaimed, but which does not necessarily form part of this scheme.

The soil thus obtained will become so valuable for reclaiming land from the harbour shore, that I have shown Inlet Basin. a large inlet basin extending over the whole space of the present Timber market, abutting on the base of Belvidere Hill on the north, and on the Elphinstone Bunder on the south, the soil from which large area will reclaim an important belt of land towards Cross Island. This inlet basin will accommodate all the country-boat coasting trade, without the necessity of crossing any of the roadways of the island, and yet be in close proximity to the part of the Native Town connected with it. The existing Cotton Presses will be fully employed in pressing the sea-borne cotton, whilst that brought by rail from the Cotton districts will, no doubt, be dealt with by presses erected on the Flats. It is only necessary to put two pairs of gates and a partition-wall to the Byculla Tank, and make a connection with the Docks, and there would be two splendid Graving Docks at a trifling cost.

Two million nine hundred and forty thousand square yards of the Flats are still the property of the Government. The Flats. and if these were sold at the low average rate of 8 annas per square yard, they would realize 14,70,000 Rupees ; and I have no hesitation in saying that, were they to borrow money in England to execute the works I have proposed, and liquidate the debt by creating a Sinking Fund from money realised by the sale of the land over the wide extent of this recently recovered ocean shelf, great gains would accrue. No such other chance can arise for utilizing the Flats as the creation of Docks will give. And I honestly believe that the sums realized by the sale of these waste lands, together with what will be reclaimed on the shores of the harbour, will go far towards paying for the whole work, as it is there that Bonded Warehouses, Custom House, Godowns, Cotton Presses, Seed-cleaning Mills, Oil Mills, Seamen's Barracks, &c., &c., will, nay *must*, be eventually erected. Ships from Melbourne, Aden, &c., will help the cause of level-raising by casting their foreign ballast on the Dock Quay. Boats could

come in by the Canal laden with soil brought from the other side of the harbour ; thus, in ten years we should behold the whole of the present desolate waste Sahara, called the Flats, brought up to the level of the present Railroad, with broad roads marking out streets secured for future generations ; and our two Railways delivering the produce of broad India from their waggons into the very holds of the ships, which are to convey them to the western world. It is only on these Flats, thus utilised, that commerce can expand her future operations for all time to come, without being cramped in the process. The present Merchant's Offices can still form the field of barter, until they shall select sites for Offices and spacious Godowns, which will give their Firms a rooted hold on the soil, and an undying name ; but it is only on a large area like the Flats, that commerce can get through her gigantic task of dealing with a continent in connection with the merchant fleets of the world.

I propose to feed the Docks with clear siltless sea water, by a four-feet culvert from the west side of the Feed-water for Docks. island, or by making a navigable narrow canal, by which barges might deliver goods along a whole street of godowns, extending to the west side of the Flats. In fact, such narrow canals would not only make the Flats a diminutive Holland of navigable usefulness, but they would serve to receive the superfluous rain, until the fall of the tide allowed it to be let off into the sea. In a word, with plenty of narrow canals connected with the Dock, suitable small barges would become the bullock hackeries of the Flats. It must also be borne in mind that the material of which the Flats is composed, is an indurated clay-stone, which it is believed would answer with piles, and wale-rubbing pieces for ships to lie alongside of, as they would have no motion, and the water in the Dock would always stand at one even height. Should it be feared that the water in the Docks would become foul from stagnancy, this plan will ensure a daily current flowing *out* of the Docks, through the Canal into the harbour, half an hour before and half an hour after high-water on the harbour side, as I am informed the tidal level of the sea is two feet higher on the west side of the island than it is in the harbour ; and I have no doubt that, in strong south-west gales, it is especially so.

Among the many great advantages of the site chosen for the proposed Docks, is the complete and absolute security of the Docks from an Enemy's fleet or from fire. The position, completely hidden from the harbour as it is, fully assures exemption from the first ; and as the three-feet water main of the Vehar works traverses the whole length of the Dock Quay, there will be an instant command of such an abundant supply of water as to insure the prompt suppression of the latter, besides the facilities it would afford for supplying ships with water.

But in addition to the above advantages, the Vehar-water pressure is of more than sufficient force to do all the Water power. hoisting work of the Docks ; it will tow the ships along the Canal, from and to the Docks : it will open and shut the

Canal entrance gates ; like steam, this powerful agent will never tire of well-doing.

Who shall construct these works? The construction of these works may be settled as follows:—

1st.—The project may be offered to the company already formed in England, of which Admiral Sir Henry Leeke, C.B., is the head.

2nd.—A company may be formed in Bombay to carry it out.

3rd.—The Government might do it themselves and let it out in easy short contracts, and get their own officers to supervise the work. The Gates and Canal, from the entrance to Warree Bunder, would, no doubt, be let to English Contractors at home, as this would include the most difficult and expensive portion of the whole work for its area.

If holders of land on the intended site held out for heavy prices, the Government would take the Canal on westward, and make the Dock on their own land, when the (now worthless) Flats would fetch Rs. 3 per square yard, and plenty of buyers at that price. But it should not be forgotten that the Government can resume possession of all land for public purposes.

This scheme possesses several remarkable merits. 1st.—It is out of reach of an enemy's fleet.

2nd.—In case of an incendiary fire, the flood of water from the Vehar main would instantly extinguish it.

3rd.—The Vehar-water pressure being some 60 or 80 lbs. to the square inch, will give a motive power all over the Docks, passing as the main does parallel to the whole length of the Dock.

4th.—In lieu of the two Railway Companies having to spend half a million sterling each in reclaiming from the sea termini in a confined locality, which would not serve the commercial wants of the present century—perhaps not of the present generation—they would find them ready to hand on the Flats.

5th.—The P. and O. Company can abandon the idea of spending £200,000 in making Graving Docks at Mazagon, and get possession of the Byculla and the large Tank adjoining, where are Graving Docks nearly ready-made; their steam ships using the Wet Docks, alongside which they could build their Coal Stores, Offices, &c. &c.

6th.—The whole work can be executed in eighteen months.

7th.—The proposed works are situated in the very heart of a population of 700,000 inhabitants, and could consequently command an unlimited amount of labour.

8th.—The harbour being clear of merchant vessels in time of war, would enable our own ships of war to manoeuvre and engage those of other nations with greater chances of success.

9th.—The Flats are the healthiest part of the Island.

NEW WET DOCK SCHEME ESTIMATE.

	Quantities Yards.	At per Yard.	English Currency.	Bombay Currency.
*Purchase of Canal Site, 1,800 yards × 33 yards= Sq.	59,400	Sq. yd. Rs. 2	£ 11,880	Rs. 1,18,800
Purchase of Dock Site, 600 yards × 150 yards= Sq.	90,000	Sq. yd. Rs. 1-8	£ 13,500	Rs. 1,35,000
Purchase of Warree Bunder Inlet Basin Site, 300 yards × 300 yards= Sq.	90,000	Sq. yd. Rs. 3	£ 27,000	Rs. 2,70,000
Excavating Canal, 3,000 yards × 20 yards × 8 yards (if in clay) = Cub.	480,000	Cub. yd. Rs. 1	£ 48,000	Rs. 4,80,000
Excavating Dock, 600 yards × 100 yards × 8 yards= Cub.	480,000	Cub. yd. Rs. 1	£ 48,000	Rs. 4,80,000
Excavating Waree Bunder Wet Basin, 90,000 yards × 10 yards= Cub.	900,000	Cub. yd. Rs. 1	£ 90,000	Rs. 9,00,000
Canal Retaining Walls, 6,000 yards × 10 yards × 1 yard.....= Cub.	60,000	Cub. yd. Rs. 10	£ 60,000	Rs. 6,00,000
Dock Retaining Walls, 1,200 yards × 10 yards × 1 yard.....= Cub.	12,000	Cub. yd. Rs 10	£ 12,000	Rs. 1,20,000
Dock Retaining Walls, south end, 800 cubic yards= Cub.	800	Cub. yd. Rs. 10	£ 800	Rs. 8,000
Waree Bunder Basin Retaining Walls 1,160 yards × 8 yards × 1 yard= Cub.	9,280	Cub. yd. Rs. 10	£ 9,280	Rs. 92,800
Two pairs of Wrought Iron Gates..	....	....	£ 15,000	Rs. 1,50,000
Excavating and fixing ditto. ..	....	....	£ 5,000	Rs. 50,000
Two Canal Bridge Boats .....	....	Rs. 20,000	£ 4,000	Rs. 40,000
Canal Excavating, if found to be Rock, will be increased .....	....	....	£ 96,000	Rs. 9,60,000
Dock Excavation do. do. ..	....	....	£ 96,000	Rs. 9,60,000
Do. do. do. ..	....	....	£ 180,000	Rs. 18,00,000
Warree Bunder Wet Basin.....	....	....	£ 71,646	Rs. 7,16,460
Add 10 per cent. for Compensation and Contingencies .....	....	....	£ 788,106	Rs. 78,81,060
By Credit for 620,000 square yards of land reclaimed or made valua- ble by being raised in level from 1,860,000 cubic yards exca- vated applied thereto= Sq.	620,000	Sq. yd. Rs. 3	£ 186,000	Rs. 18,60,000
Note.—If the Cuttings should prove to be of Rock, the charge for Re- taining walls should be taken credit for ..... ....	....	....	£ 602,106	Rs. 60,21,060
			£ 82,080	Rs. 8,20,800
			£ 520,026	Rs. 52,00,260

* The remaining length of the Canal is the property of Government.

† As it is near a dead certainty that the course of the Canal from Belvidere to the Parell Road will be in clay, the £96,000 allowed for rock excavation might be taken from the estimate, which would reduce the cost of construction to £424,026.

‡ All the rates are allowed by competent Engineers here to be exceedingly high, except the masonry, which by some is thought to be below the usual rate. But, on the other hand, no credit is taken for the value of the Stone excavated.

ESTIMATE FOR DOCK REVENUES.

To show the importance of providing full and ample accommodation for the expansion of commercial operations, it is only necessary to show the following table :—

EXTRACT G FROM COMMISSIONER OF CUSTOMS' REPORT 1857-58.

"Comparative Statement showing the value of the General External Trade of the Port of Bombay, for the last six years preceding 1858-59, viz. :—

<i>Total value of</i>	<i>Imports.</i>	<i>Exports.</i>
For the Year 1852-53.....	£ 9,011,925.....	£ 9,457,661
,, 1853-54.....	8,438,362.....	9,507,189
,, 1854-55.....	7,825,226.....	8,169,881
,, 1855-56.....	11,577,304.....	10,291,916
,, 1856-57.....	14,484,639.....	12,579,393
,, 1857-58.....	16,316,003.....	14,675,359
—————	—————	—————
Total.....	£67,653,459.....	£64,681,399
Six Years' average value ..	£11,275,576.....	£10,780,233
Value for the Year 1858-59.	18,381,541.....	15,950,882
—————	—————	—————
Nett Increase in the year 1858-59 over the average of the Six preceding years.	£7,105,965.....	£5,170,649"
	—————	—————

This table, taken from the Commissioner's Report for the year 1858-59, shows that accommodation in the shape of Docks or Landing Wharves has become an imperative necessity, as the following extracts from the Commissioner of Customs' report unmistakably shows :—

EXTRACT A, DATED 19TH JUNE 1858.

"The trade of this port and the number of ships frequenting it have very much increased, while the wharfage and landing accommodation for goods, which was always paltry and totally insufficient for the port, has not been enlarged or improved, and consequently our merchants are unable to land or ship their goods with such ease and facility as is desirable ; and from the same causes also, the Customs Department is unable to make proper arrangements in respect to the separating Dutiable goods from Free goods, and Imports from Exports ; neither has the Customs Department, in many cases, the means of weighing the several goods brought for Import or Export. The confined state of the Custom House premises, while it often calls forth a growl from the merchants, is at the same time the cause of much anxiety and embarrassment to the Customs Department.

"The wages of boatmen have very much increased, and the number of men available for work are not nearly sufficient to meet the demands of the port. The same remark is applicable to cargo boats with crews complete, which are not procurable at all except on payment of very heavy sums, and even then frequently not procurable until after a lapse of many days. A cargo boat which, in former times, could be engaged to go to Nagotna for Rupees 7 to Rupees 11, is now with difficulty procurable for Rupees 40 to Rupees 50."

In reference to the want of accommodation alluded to in his report for 1857-58, Mr. Spooner, in his report for 1858-59, observes that—

"The same remark is still equally applicable, as nothing at present has been done.

"The trade of Bombay still continues to increase, and it now may be considered, in a commercial point of view, as *the Capital of India*. The following Statement will tend to show the growing importance of the port, as it is to be observed that the realizations at the Bombay Custom House, which only five years since were, say, £302,400 per annum, now amount to £606,920 per annum.

"In fact the trade of the port of Bombay is increasing and swallowing up the foreign trade of all the petty Continental ports.

"In conclusion I would merely add that what we most stand in need of at the port of Bombay are—

1st.—Enlarged Custom House premises.

2nd.—Extended Wharfage, and also Quay accommodation with covered Sheds.

3rd.—Warehouses on a very large scale.

4th.—Improved description of cargo boats.

5th.—Improved system of landing cargo, so that it may be landed at fair and moderate rates, and without the great delays and obstacles which at present exist.

6th.—Docks for ships requiring repairs, or requiring to be over-hauled."

**ARRIVALS AND DEPARTURES OF VESSELS TO AND FROM
THE PORT OF BOMBAY DURING THE YEAR 1858-59.**

Arrivals in 1858-59.

Description.	Vessels.	Tons.
1	2	3
Under British Colors.....	373	288,917 $\frac{1}{4}$
" American Colors	40	42,555
" French Colors	62	28,714
" other Colors	37	18,199
Total....	512	378,385 $\frac{1}{4}$
Steamers	80	69,080 $\frac{1}{4}$
Total Vessels and Steamers....	592	447,466 $\frac{1}{4}$
Native Craft	6,015	258,034 $\frac{1}{4}$
Grand Total....	6,607	705,501

Departures, 1858-59.

Description.	Vessels.	Tons.
1	2	3
Under British Colors.....	396	309,461 $\frac{1}{4}$
" American Colors	38	35,528
" French Colors	62	32,176
" other Colors	31	15,604
Total....	527	392,769 $\frac{1}{4}$
Steamers.....	81	51,983
Total Vessels and Steamers....	608	444,752 $\frac{1}{4}$
Native Craft	4,853	202,680 $\frac{1}{4}$
Grand Total....	5,466	647,432 $\frac{1}{4}$

As this is a mere preliminary and rough estimate, both of the expense of construction of the works proposed and of the revenue to support them, it will be sufficient for me to give total results only:—

	Tons.
Tonnage arrived in 512 Vessels and 80 Steamers	447,466
Tonnage departed in 527 Vessels and 81 Steamers	444,752
<u>Making a total of... 892,218</u>	

	English Currency.	Bombay Currency.
Freight Merchandise which, at Rs. 1 per ton, gives	£ s. 89,221 16	Rupees. 8,92,218
And say 400,000 registered tons for Dock dues at 8 annas per ton	20,000 0	2,00,000
	<hr/>	<hr/>
	£ s. 109,221 16	10,92,218

Thus, with the above revenue, it will give 21 per cent. per annum upon the outlay.

To those acquainted with dock revenues there are many additional sources of legitimate income which would go to swell the above percentage, such as supplying water, use of cranes and machinery, loading and unloading ships, head-money for passengers and luggage, animals, conveyances, &c. &c. :—

Native or Coasting Trade.

	Tons.
Arrivals in 1858-59	258,034
Departures in do.	<hr/> 202,680
Total tons....	<hr/> 460,714

If we take only one-third of this for native craft using the inlet basin at Warree Bunder, it gives 153,571 tons, which, at 8 annas per ton, will yield an additional revenue of Rs. 76,785 or £7,678 10s., making the total revenue Rs. 11,69,003 or £116,900 6s., equal to nearly 21·47 per cent. per annum, to say nothing of increasing revenues, with the increase of the trade of the port, and when it is considered that of the two systems of railway connected with Bombay (whose total mileage will eventually reach to 2,200 miles) about 400 miles only are now open, this increase must become a reality and not a speculative idea.

I have only further to add, that should a Company or the Government take this scheme up, I trust I have shown that it offers a fair field for enterprize and utility, and for a regular survey and estimates, of which I have only given the rough details, but founded on reliable data.

Bombay, 22nd February 1861.

WM. WALKER.

CIRCULAR.

Bombay, 12th March 1861.

THE subject of Wet Docks has been frequently brought forward and discussed,—plans have been suggested, turned over and talked about, and then allowed quietly to fall into abeyance and ultimate abandonment. This state of things is readily accounted for. The European merchants have no power to enter into any engagements in connection with the mercantile firms they represent. The Government officials cannot engage in such speculations. Another large section of the European class have neither wealth, power, nor influence to take the lead in ameliorating projects, and the moneyed Native class are afraid to move alone without European leaders in such large undertakings as the construction of docks or piers. Thus, without advisers on whose judgment in constructive matters they would rely, all projects fall to the ground, even from a money point of view.

There are also strong currents of local interest which thoroughly influence these questions, such as the situation of existing bunders and piers (both subject to tidal delay), cotton presses, house property, proximity to the railway, &c. ; these all influence public opinion so fully that I doubt if it be not the wisest course for some outside ruling power to build our docks, plant our Railway Termini close to them, and then bid our discordant masses to use them.

It is now, I believe, beyond a doubt that a dock company has been organised in England by Admiral Sir Henry Leeke, C.B., for the purpose of establishing Wet Docks for mercantile purposes in Moody Bay. This scheme is backed by so many of the most influential shipowners, and merchants of London, Liverpool, Glasgow, and other ports trading to and with Bombay ; and the fact that the scheme has received the sanction of Sir Charles Wood, the Secretary of State for India, gives it such force and promise as to make one regret that the site selected should have been open to so many objections, that the undersigned has been induced to bring forward in a pamphlet a Wet Dock Scheme, which the writer thinks will ultimately meet the high approval of the whole community of Bombay, when private interest shall yield a little to a great public benefit. It also harmonizes so fully with the best interests of several powerful companies and the Government, besides providing so fully for increased future wants, that it only requires Sir Henry Leeke and his company to adopt it in lieu of the Moody Bay scheme to make it a *fait accompli*. I will endeavour to show some of the disadvantages the Moody Bay site labours under, as compared with the manifold advantages possessed by the site on the Flats.

1. In the outset it is pretty well known that the Moody proposed Docks could not be made under one million sterling.

2. The approach to them, if made, would be over (or at all events near) foul ground : and the site of the sea-face wall is composed of mud and rock, which is the very worst ground in which to erect coffer dams, and if made, these latter would be in danger of being swept away by the first south gale in the monsoon season. And as regards walls for

Docks, as is well known, it is not only necessary to reach a solid foundation, but that foundation would have to be sunk at least 4 feet in the solid rock to give the walls a good foot-hold against lateral thrust, which these Docks would especially require,—the sea-face being parallel with the length of the Docks.

3. The proposed Moody Bay Docks would have to be wholly created from a low sea-beach, instead of from excavated space that would only require a lining of masonry.

4. The site in Moody Bay would only half fulfil its usefulness, unless each of the two Railways could also create termini of at least 100 acres for each under the same disadvantageous and difficult circumstances, and this could not be done under the cost of about £500,000 to each railway; and even when made, the approach to them by railway, consisting of a double line of rails only, would be insufficient for two railways, whose trains each contain 60 waggons, and loaded with bulky goods like cotton, seeds, &c. To give additional lines of railway it would be necessary either to take space from existing Bunders, or to pull down one half of Dongree Cooly Street, which property is nearly equal in value to that in the Fort.

5. But, supposing the proposed Dock and Termini for both railways to be made, where is the space for commercial operations? The Fort is now crowded to repletion. House-building room is not to be purchased for money, and the Government don't own a square yard to give. House rent in the Fort has now risen to such a fearful price that none but wealthy mercantile firms can hire them. A few tradesmen are there, but they are nearly all sure to fail in business (if they don't own the houses they occupy), owing to excessively high rents, which are far higher than those for houses in Regent Street. In illustration of this I may remark that the proprietors of the *Bombay Times and Standard* pay for their premises £150 per month for two houses adjoining each other, one of which was let three or four years ago for £18 per month. The other is only recently built.

If this state of things now exists (and no one can gainsay it), with only 370 miles of railway opened, and with the steady increase of Import and Export value of merchandize through the Custom House to the extent of two millions annually, what will be the future demand? With this steady annual increase before us what must be the terminal wants of the two railways when quarter-hourly trains of goods shall arrive from over a total of 2,200 mileage? These are facts which may make one pause when about to spend one million in Wet Docks, and one million for Railway Termini, both of which are to be recovered from the sea, with an impracticable bottom of slush-mud interspersed with rock, and that, too, in an already over-crowded locality, incapable of future expansion.

6. The chances of starting any Wet Dock or Pier Scheme in Bombay, with money carrying interest from 14 to 27 per cent., will be quite impracticable; but were these schemes initiated in England, with such a list of mercantile firms as I learn are willing to back the project, and favoured by the Bombay Government sanction, as I feel confident the

project for Wet Docks on the Flats will obtain, the moneyed class will gladly invest capital in a tangible scheme such as I propose, where its realization could be effected in eighteen months, and where the remunerative profits are so large and so certain.

There is another reason why the scheme I recommend should be initiated in England. If it were known that Wet Docks and Railway Termini were to be established on the site I propose on the Flats, there would be every available machinery set to work to thwart the scheme by the owners of house property in the Fort. But on the other side we should have—

1st.—The European mercantile firms who, having no material interest in having offices in the Fort, would be only too happy to establish offices and spacious godowns adjacent to the proposed Docks ; even Native merchants under the above conditions would do the same.

2nd.—It is the interest of the Government to support the Canal and Wet Dock Scheme on the Flats, as it will reduce to one-third the rent they now pay for their public offices, in addition to putting some 15 lacs of rupees in the public treasury from sale of waste land, which can in no other way be utilized. This scheme, in fact, will create a new mercantile town, which, if laid out so as to ensure and form a part of a well-digested sewage system, will not only be a great sanitary blessing, but will give us that great desideratum which has been the talk of the last ten years, but which appears as far off as ever—more elbow-room.

3rd.—It is especially the interest of the Great Indian Peninsula Railway Company, and the Bombay, Baroda, and Central India Railway Company, to join and foster this scheme, as by establishing Wet Docks on the Flats that locality will also be the more suitable termini for their heavy goods' traffic, still using Boree Bunder for passengers, parcels, and mails. But they can eventually run their passengers into the Fort when the land reclamation (now half finished by the Government) has been completed.

By adopting my scheme the fashion for transacting every description of official, municipal, and mercantile business in the hot and unhealthy limited spot which the crowded Fort affords, will gradually die out with enormous benefit to the community at large ; and they may even see the dense mass of people who now live in it take heart of grace and seek the healthier breezes outside. Query, would not the large population in the Fort, when under the trying infliction of being shelled by an enemy's fleet, be a source of disquietude to its garrison ? Fear, famine, and despair might engender treachery, to say nothing of the houses when on fire, from their close proximity to the fortifications, driving the gunners from the batteries.

I can only compare the Fort to a block-house in an American forest, into which scalp-hunting Indians have driven the neighbouring back-woodsmen, who have been fearful of venturing out again. If we go back one century, and substitute the Mahrattas for the Red Indians, Mammon for Fear, the similitude is not far-fetched.

The Fort may remain the *strong box* of the Island, but is not now fitted as a place we can in these stirring days carry on our extended commercial operations.

The P. and O. Company would perhaps stay the vast outlay of money they are about to spend in building Graving Docks on the site of the Government old Mazagon Dockyard, if it were pointed out to them that they would do better by joining this scheme, and let their steam-ships use the Canal Docks in common with other merchant ships, and then purchase the two large tanks (Byculla and Huntly Lodge), both of which would give ample space for all the Graving Docks that Bombay can ever want. Both these large tanks are already excavated in hard rock, deep enough for Graving Docks, and only require a short passage communicating from the proposed canal docks, when, with the present rock sides and bottom of the tanks dressed even, they are ready made to hand, with the exception of gates and partition walls.

W.M. WALKER,
Great Indian Peninsula Railway.

HOME MADE SHELLS VERSUS STINK POTS.

SIR,—There have been so many outrages in Chinese waters from piratical boats boarding defenceless merchantmen that I beg to offer a suggestion, and a novel weapon of defence.

My suggestion is, let Her Majesty's Consul make it a rule that Pilot Boats shall place their pilots on board ship by means of a small boat, and withdraw them in the same manner. By all accounts the Pilots and their boats are the cloaks under which all the mischief is done. In the recent case of the *North Star*, if I mistake not, the pirate who boarded them was thought to be the pilot. I would, therefore, make Mr. Pilot's boat keep a wider berth.

Now for my shell. Cross lace, with any coarse tape, or rope yarn, four soda water bottles, or three beer bottles, fill with gun powder, and cork up without wax. The tape cross lacing is to prevent the bottles breaking whilst in friendly hands. Take two yards of canvas, of which make a bag by sewing the up sides. When suspicious boats are about, and in the night watches, a steady sure hand should put the bottles in the bag, and see that the cook keeps up a fire so as to afford plenty of small live coals. Let us suppose all this attended to. Jack Wide-Awake sees Mr. Pirate, *alias* Pilot, coming alongside; and holds the bag containing the bottles, cook stands by with a shovel-full of live coals, pop they go into the bag, Jack gives the bag a steady heave over the gunwale into the boat, the bottles crash and spill the gunpowder amongst the live coals, the boat's sides are driven open and down she goes. The ship receives a sharp concussion, but no harm is done; and Jack Wide-Awake laughs like a Cheshire cat while relating the affair to the pleased Captain, who measures Jack for a 2nd mate's berth on the next voyage.

Bombay, 3rd July 1861.

TOM CRINGLE.

ELBOW ROOM.

SIR,—I suppose you are well acquainted with the exorbitantly high rents now demanded inside the Fort walls. If so, will you kindly devote the influence of the *Times and Standard* in exposing it, and devise a remedy. The chief cause of high rents is the Government. If Sir George Clerk would only ask for a return of all the places rented in the Fort by all the departments of Government, the uses they were put to, and the sums paid as rent, it would raise every hair of his head with astonishment. But their cry is still more room, and I learn that the tradesman in the lower part of Frith & Co.'s shop has to turn out—for what? Why, to make a beer godown of it! and at a rent too fearful to tell to a Government deeply in debt, and about to tax trade and commerce to support such an unnecessary waste of money.

Large quantities of beer, the property of Government, are from time to time condemned as damaged; and, if I am not mistaken, it is alone due to stowing it in the hot, fusty, unventilated godowns in the Fort, when at the same time they are letting to merchants, at insignificant rents, the much cooler lockup "casemates," which are far more fitting beer godowns than any to be found in the Fort.

Our new Governor could add considerably to the trade of Bombay, would he do a few things I note here:—

1. Send the Cooperage to Sewree Fort, where a small jetty could be made for its accommodation, and where it will be able to receive and ship its casks direct from and to boats, as it should be done.

2. Build beer godowns at Sewree close by, in close connection with the Cooperage, so that beer can either be received from or put on board ships without the intervention of hosts of costly, lazy, overfed, commissariat bullocks, and equally costly carts. If the godowns are properly constructed, they will be well ventilated and cool, and we shall hear no more of large consignments of beer turning sour from over-fermentation in hot, stifling Fort godowns.

3. Send the timber stacks to Tank Bunder (on Government land), where it should be, and where it can also be received direct from the boats that bring it to Bombay, and when wanted by any of the Departments for use it can be launched, and any quantity be made into rafts, and delivered by water for two or three rupees where it now costs hundreds to effect the same work.

4. The Town Hall is a handsome building, and would accommodate a handsome upper story added to provide a Supreme Court and other law offices. Were any joint stock company allowed to do this, and take credit for present rents paid for law courts, which this plan would accommodate, they could afford to pay back to the Government 50 per cent. of the savings, and still make a snug little 75 per cent.

5. Make a square block of the present Secretariat by extending it north and west, leaving a vacant courtyard in the centre, reached by archways in the portions of the building to be added, and there would then be accommodation for all the Government offices in the Fort, and it would be the coolest and best ventilated building in it. The sums

spent in building the added portions would be the merest fleabite imaginable, when viewed as interest on the enormous rents saved.

6. Above all, let there be held out every inducement to reclaimers of land. These are the benefactors now wanted in Bombay. Every man who reclaims a yard of land, and turns it to the accommodation of commerce, does more good than an army of almsgivers to idlers, or who insanely release Marwarrie swindling debtors. I would even allow Mr. Fairbairn to commence his "Malabar beach," as it would, at all events, give employment to the poor for a few months, and help to fill up the inner portions of the Bay.

7. Turn Colaba into a little colony of soldiers by building lofty barracks for the accommodation of the troops who occupy the Town Barracks. The Town Barracks is no place for English soldiers with its surrounding temptations of sly grog shops, &c. &c. Rent the vacated Town Barracks as merchants' offices.

These few suggestions, if carried out, would confer undoubted benefit on the Government, and would give us a little more elbow room *for the present*. But pioneers for reclaiming land, and giving enlarged accommodation, should be ever on the look out to serve us our *sorest* want—"more elbow room."

Bombay, 12th June 1861.

TOM CRINGLE.

SINK OR SWIM.

SIR,—It is not generally known that common calico or silk when wetted with water is nearly air-tight, except under great pressure. Acting on this hint I invented a calico-swimming shirt in 1838 by making it double with a common wooden spigot and plug under the chin, by which it could be inflated at pleasure. It is kept from rising by a broad strap of calico between the legs. I found on trial that I could support five persons in the sea when clinging to me, and have reason to believe that this shirt would be far better adapted for life-boat crews than the hard, cork-stuffed life-belt by Carte,—with the shirt tied around me I have dived under water with very trifling retardation. During the mutinies I was minded to propose that each foot soldier should carry a calico tube two inches in diameter, and long enough to encircle his chest twice, to be wrapped flat around his head dress in the shape of a "pugree." Thus, when a river was to be crossed in the absence of pontoons, and when not too broad, a whole regiment might rapidly cross over, especially if a few good swimmers were to run a few guide lines from side to side and make them fast.

But I think it could be used with great practical effect by cavalry, especially by regiments like "Hodson's Horse," the "Guides," &c. For cavalry the tube should be three inches in diameter, and long enough to go twice around the horse's chest, behind the fore legs, and brought up behind the holsters. Thus supported, a dashing body of cavalry might spread and plunge boldly into a river, and cross with ease after

having wetted and inflated the tubes. The tubes may even be ready fixed, and the horses ride into the river deep enough to wet them previous to inflation. When not in use the tube may be rolled into a neat compass and carried at the saddle ring.

I trust that some of our young cavalry officers will give this a trial, and publish the result. The calico should be thick, and close woven, and the sewing of the tube close and strong with good sheeting thread.

I need not point out to captains of ships that if one of the swimming shirts or the tube-belt were put on to a stout swimmer how easy he could carry a line ashore, if not a rocky coast. A man with the swimming shirt on, is lifted so high out of the water that he would blow on shore.

Bombay, 29th July 1861.

TOM CRINGLE.

DESTITUTE EUROPEANS.

Sir,—In your issue of the 21st appeared a well-written appeal to the sympathy of the general public on behalf of our poorer European brethren now so numerously out of employ in all the large presidential towns and cities of Western India. As I have had a large experience amongst this class, so far as employing them under *my* master, perhaps a few words in reply may be allowed. My experience is that seventy per cent. of these stray European waifs either are, as compared with intelligent native clerks, below their mental capacity, or they are drunken loafers whom nothing but utter destitution causes to abstain from drink until they are re-employed; when, after they hear the first strange jink of rupees in their pocket, they throw prudence, ease, and gratitude to the winds, to go wallowing in the hog trough of drunkenness again. Such are the lamentable facts of my experience. And even if you catch that *rara avis*, a sober man of decent mental intelligence, there are nine chances out of ten that he has the peacock bump of self-esteem so largely developed as to be above the business for which he is paid. Do we want examples of this? Look at Railway Stations where they are placed to carry out methods of cleanliness, order, and intelligence,—supposed to be inherent in our race,—with very few exceptions do we discover the least footprint of endeavour on their part to fulfil the reasonable wishes of their superiors? Do we not often see them strutting on platforms as if above all claims of the honest zeal and labour they are bound to display?

The class of destitute Europeans under reference are increasing so rapidly, and their chances of employment are so hopeless, that, unless Government arm themselves with a deportation Act for all destitute persons of this class, they must either become a disgrace to their race as street beggars, take to the road for a living, or our jails will have to be enlarged to receive them as vagrants. Could Government employ them in improving some of our Ghaut roads, or place them in a cotton-growing colony in the waste lands of Candeish? Who can suggest a remedy for this growing gangrene?

Bombay, 27th august 1861.

TOM CRINGLE.

OUR CHARITIES.

SIR,—Do the missionaries and other clergymen of Bombay appeal to you gentlemen of the Press with the regularity which is observed towards us outside units? I think not, or you would, at some odd time, sift the respective merits of the hundred and one claims which are laid on the already burdened shoulders of the charitably inclined Europeans of Bombay, and which charities appear to be added to in number by every new bishop or clergyman who arrives amongst us. Mind, I am not writing against charities, but for them.

The large-salaried, but larger-hearted charity-giving civil and other servants of old John Company, are fast disappearing from among us as contributors to our “imperative” charities, and which should have claim on our purses prior to all others, viz: the educational asylums for orphan Christian children. It is well known that these imperative charities are on the brink of bankruptcy from want of funds, yet in the face of these facts we are called on to subscribe for doing something to some far away Jewish tribe, called “I will takee all I getee.” Is this one of the lost tribes? If so, why don’t those who found it, feed it? There is scarce a day but what charity-givers are haunted by a “converted heathen” armed with a begging diploma. Why should a man disgrace his new religion by turning a loafing *gaberlunzie*?

By turning to the charity lists of this city it will be found that, although our European population is large in numbers, the givers are small; and when it is considered how hard the recent infliction of raised house-rents, income-tax, increased customs’ duties, prices of food, servants’ wages, and the numerous calls on our purses to alleviate the many real cases of distress continually recurring in our individual orbits, to say nothing of the duty of laying by *something* for that desperate old sinner No. 1 and Co. to live on in old age,—I say that our clergymen should weigh well the policy of putting any more last straws on the camel’s back, or we shall certainly see our *imperative* charities bankrupt in favour of others which yield little or no fruits for the seed sown. In one year alone the charity income of the Byculla Schools fell off Rs. 7,000. What is to be done with these children if such fearful deficiencies continue?

But this is as nothing until the infant tide of poor children shall be deprived of their present protectors, which the Imperial Government poured into India about a year and a half ago, some in the ship *Accrington* to wit. I will predict a solution. Owing to the increased cost of lodging, food, and clothing, the whole of the schools will have to be transferred to England, the military section to be incorporated with the Duke of York’s School or Royal Military Asylum, the remainder to be located in some healthy locality where, as “the Indo-British Orphanage,” it will intercept a few of the guineas which foolish, but kind-hearted, old men and maids now give to harness clerical hobbies, which, although always kept at a good showy trot, seldom arrive at the goal of success. I found the justice of this letter on my plea, that it is the duty of every true Christian to give his mite to the healthful houseing, abundant feeding, and suitable education of Christian orphans, or otherwise des-

titute children, before a farthing is given for other purposes. Already one's sight is shocked, and national esteem degraded, by seeing curly-headed white children playing games in the public bazaar streets with native children of the lowest grade, whose little tongues continually drip language so foul that St. Giles would blush to hear. Is our young national Anglo-Saxon blood to be wrecked on a shore so foul when money aid would snatch it from such pollution, and nestle it in its native home? It was the neglect of these precautions, coupled with a due want of intercourse with the mother country, which engulphed the Portuguese race, not with the higher class races of India, but with its dregs.

Bombay, 31st August 1861.

TOM CRINGLE.

A NOVEL SCHEME.

SIR,—I was much surprised, although of course delighted, to see the Editor of the *Saturday Review* had become a candidate for the vacant Municipal Commissionership. But at the tenth hour Mr. Connon, the proprietor of the *Bombay Gazette*, appears on the field of battle as a candidate also. This has nearly taken away the breath of surprise, and in its high oddity has given birth to an idea which I think worth communicating. Mr. McLean, of the *Saturday Review*, very properly thinks that a man of letters, like himself, is a very fit person for a Commissioner. Shall we be hard on the owner of the *Bombay Gazette* for thinking that an old Indian and a barrister would be even a greater acquisition than Mr. McLean? Forbid it justice and common sense! But as there is only one vacancy, both the gentlemen whose cause I advocate cannot win; one must lose. Why must he lose? I may say why should *we* lose services so valuable? Here is the germ of my idea. Mr. Forgett is of immense service to the Municipality, of which we shall soon see abundant practical proofs if he is not tied and hampered by his fellow Commissioners. He might, nevertheless, be induced to retire if strongly appealed to in favour of my scheme. Then there is Mr. Hutchinson, a young man, who might easily be persuaded to be made Controller of Pilots, or Assistant Harbour Master, when we should have a clear field into which I vote that you, Mr. Editor, Robert Knight, Esq., become a *third candidate* (I, of course, ignore all pretensions on the ruck of names in your advertising columns). Here we should have the real true and pure *trio juncta in uno*. Yes, we will (I'm a J. P.) appoint you three editors as Municipal Commissioners. You can make it quite a snug borough. Will any grumbling "Tom Cringle" or "Standcock," or the twenty other sticklers for what in their weak minds they consider the right thing, dare to say a word? Say? Wherein? You will have command of the fortress of public opinion. Are you going to show its mutinous colours? Not a bit of it. Under these happy combinations I predict that you would become the most successful Board possible. You might then divide the whole municipal duties into three departments thus:—You of course would take the city improvement; the *Bombay Gazette* would

deal with law disputes, rights of tenure and market staffs; whilst the *Saturday Review* would manage the watering and lighting. If you will only go in and win, depend on the warm support of

Bombay, 28th September 1861.

TOM CRINGLE.

A TIGER ADVENTURE.

SIR,—Feeling the want of change of air after recent illness, I left Bombay for Poona on the 6th instant with a change of linen, a tooth-brush, pinch of salt, cold fowl, and a pint of beer, the latter three articles to comfort the inner man on the road. After a pleasant ride as far as Narel, like Dugald Dalgetty, I began to feel the want of the *provender* I had armed myself with. I thereon polished the bones of one-half the fowl, with a due modicum of bread, and washed them down with a pint of beer. Mark this! as I am about to show that if *in vino veritas* be a true adage, there is on the other hand falsity in beer.

Arrived at Campoolee, where I heard some half-told tale of a man seized by a tiger, I tumbled into a palkee and started for Khandalla, the night intensely dark, dismal, and drizzly. I felt drowsy from the motion of the palkee (beer?), and let down the heavy canvas curtains or purdahs, when to my mind scarce a minute had elapsed before I heard a roar from a tiger that made the very hills quake. The palkee was dashed to the ground, and I could hear the terrified palkee-bearers scudding up a bank to the left. In the hurry of doing so the torch they carried was extinguished, which left us in Cimmerian darkness. The shock from letting the palkee fall, thoroughly aroused me, and I listened with bated breath the approach of the foe. I had scarcely time to arrange my thoughts before I heard the cautious approach of the beast, and his restrained, yet deep, breathing. For a minute he was still, and I eagerly flattered myself that having missed bagging one of the bearers, and not *seeing* the inside passenger, he would retire and seek a supper elsewhere. Doctors tell us we can't live except by breathing fresh air into the lungs so many inspirations in a minute—pshaw, I know better. I did not draw breath for *five minutes* for fear my fury foe should fall foul of me by storming my canvas castle by a stroke of his claw-armed paw. Alas! this precaution was in vain. He began to sniff at the lower edge of the curtain, which showed that he either nosed me or the remains of the fowl. However this may have been, his deep earnest sniffings said as plainly as possible, "I know you are inside, so out you come." I held on to the thick hem of the curtain with grim despair, not at all agreeing to the latter part of his proposition. Things now took a more serious turn, as I found to my dismay that he had sniffed along the lower edge of the curtains until he reached the angle of it just above which the curtain bulged out, thus exposing me to his gaze—that is, if tigers, like cats, can see best in the dark. This solved his difficulty; in the twinkling of an eye he thrust in his huge paw, as one may have seen a cat do when trying to claw a trembling linnet from its cage. I was smoking when this affair first commenced, and

continued unconsciously to do so, until a strong pull at the cigar revealed to my terrified sight the tiger's claws within three inches of my nose. The tremulous motion with the foot (peculiar to the feline tribe when angling for prey) had ceased, although the claws were protracted, and the foot distended to the size of a soup plate, when, with one of the flashing, electric thoughts which come unbidden in moments of our direst despair, I plucked the cigar from my mouth, and with the bold aim of a Spanish *Matador* thrust the lighted end between his toes, when 'ow, whow! he drew back with a savage howl of mingled rage and pain, ran round to the other side of the palkee, where, not seeing any sign of fresh foes, to my horror he mounted his fore feet on the roof of my frail canvas castle where the rattle, of his terrible claws sounded like a shower of five-ounce hail stones in thunderstorm. Not finding the daring Ulysses, who, as with Polyphemus, had so pained him with a burning brand, the tiger came down from his survey perch and I was comforting myself with the idea that, burnt and foiled, he had retired. I sat in my confined long box, which I expected every moment to become my coffin, scarcely daring to breathe, and nearly choked myself in swallowing a sneeze, for I had a cold in the head, when all at once I heard a dull, thumping, drumming noise above my head. Travellers in the Ghaut palkees are aware that there are two openings at the upper angles of the foot end like the oblique eyes painted on the bow of a Chinese junk. It is equally well known that when our doggy friends wag their tails the action is meant (and oh how sincerely!) for a friendly greeting to his fellow-friend, man. But the wagging of a tiger's tail indicates deep thought as to the best way *to do it*. Well, it appeared he had not gone away, but must have stood in a line with the pole, and whilst deliberating what next move to make, had wriggled his tail through one of the holes described. Thus on looking up, and seeing the tiger's caudal appendage so invitingly handy for seizing, I took courage and laid hold of it with a down dead nip on the frame of the opening. The tiger howled piteously, and plunging forward dragged the palkee twenty feet or so down the road, luckily endwise, as I began to fear that, should he plunge sidewise, he might hurl both palkee and myself into the dark, murky ravine below. After this first burst of terror the tiger stood still, and I could hear the palkee bearers shouting from their perch of safety "Hold on the tail, saheb, another palkee is approaching." The tiger saw the palkee no doubt quicker than the natives, and he also saw the, to him, terrible advance of the mussalchee's flaming torch. This decided him to be off at all risks: so making a desperate leap to the left he dragged the palkee over on its side with a crash, and I was on the point of letting go the tail, when I felt something part, and a quick slipping of the skin of the tail off from the fleshy part. At the same moment I fell back with a shock like the crash from an opposing iceberg, which I judge to be owing to the fall of the palkee down the ravine. After what I thought to be hours of writhing pain from torn muscles and dislocated bones I gathered consciousness; a palkee bearer came to the curtain which he lifted and said, "Admi pani peeta" (the men are drinking water). So, after all, it was only a dream! Oh how thankful I felt! I looked out; the palkee was safe on the ground; I heard the men lapping water from a rock cleft to the left: the south

ravine loomed indefinitely deep to the right ; the bold and massive arches of the reversing station of Bhore Ghaut Incline seemed to pierce the clouds just behind, whilst the lofty ridge by which it is connected, towered above our heads as if ready to fall and crush us.

Moral—Beware of beer ! Here had I been nearly terrified to death by fighting a battle with a tiger, been hurled down a ravine, had all my bones broken, with just enough of life left to be sensible of pain—all through being rocked into dreamland in a palkee cradle by Queen Mab, who bathed my imaginative brain in a beer posset ! It is needless to say that on instituting a rigid search in the palkee for the tiger's brush I did not find it.

Bombay, 7th September 1861.

TOM CRINGLE.

THE GODAVERY VERSUS THE G. I. P. R.

SIR,—Permit me a few remarks on a letter in the *Times of India* of this day, giving an account of the ascent of the steam-boat *Mayflower* to within five miles of Chanda, in the Nagpoor District, by the Godavery River ; and on a short paragraph from your far-seeing honorable self, wherein you ask whether the cotton districts are to be tapped by means of the Godavery or by the G. I. P. Railway.

Well may the poet say “distance lends enchantment to the view.” How often Jove-like editors nod when they get afloat ! Here has this miserable little tinpot thing of a *Mayflower* been two years in getting to her present position. She is made of $\frac{1}{8}$ inch plate, is of 4 horse power, and probably does not draw more than twelve inches of water. This is the old story. What a beautiful navigable river the Godavery would be were it not full of rocks and other bars to navigation. And because the *Mayflower*, of 10 tons, after a forcing process of two rainy seasons, has blossomed at Chanda, we westerns shout “Eureka,” and straightway doubt the tapping powers of the G. I. P. Railway. If the infant of 1861 has not a grey beard before the Godavery and its feeders are cleared for the economical navigation of steam-boats, with power to tow a string of 20 empty barges against a ten-knot tide, there are no snakes in Virginia. Besides, what business has a decent commercial river with a ten-knot current ? This is most damaging to its character ; something like a fast young clerk in a bank spending £600 a year out of £200. With a ten-knot current and all its natural obstructions (which are nature’s bunds) to retard the seaward flow of its hasty waters, at what rate will it gallop when its channel shall be planed level ? Will it not run itself out of water altogether in its upper branches, like all other Indian rivers ? I may be wrong, but I’m very suspicious as to fast rivers serving navigable purposes. Even the mighty Ganges gets its navigators into bad messes, through having a fast current which drains its bed in the dry season. Let us suppose this to be a case (*Godavery vs. G. I. P. R.*), and that I have set forth the plaintiff’s case (plaintiff looks a very superficial fellow by the by). The defendant is a man of metal, has nerves like iron, appears well calculated for run-

ning at great speed, has a back broad as Atlas for carrying weight, with a good dash of brass about him. He is rather short of tin, but he says that it is in the disputed territory of Nagpore that he intends to gather that useful metal. If he gets fair play from the Bombay merchant he thinks he will beat Godavery all to smash ; he accuses them of only putting some trifling load of 35 cwt. of loose bulky cotton on his broad back, whereas he is well capable of carrying five tons in the same space which the lesser weight occupies. He, therefore, trusts soon to see mercantile houses erecting cotton presses in cotton districts where they ought to be, when, under the care of an agent, pure, white, fleecy cotton will go home to Manchester, in lieu of the dirty, draggletail colour which at present prevails. G. I. P. R. repudiates in the most vehement manner the idea of expanding bale lashings. He says, make even decent ropes and no expansion will take place. In conclusion, he says, he is willing to form amicable relations with the Godavery as a fertilizer, but as a carrying rival he laughs the idea to scorn.

Bombay, 19th September 1861.

TOM CRINGLE.

THE CROWNING BLESSING OF MAN IS HEALTH.

SIR.—As the Directors of the Mechanics' Institution are now in correspondence with the learned and gifted of our fellow-townsmen to arrange for a course of lectures during the coming session, I would most strongly recommend that some of our able medical men be invited to give a lecture on the preservation of health by newly-arrived Europeans in India.

Educated men should possess this knowledge, but the large mass of mechanics (with very few exceptions) know little or nothing of this most valuable of all knowledge, and to afford such information to this very useful class of our fellow-citizens is a paramount duty of the Mechanics' Institution—nay, so very important is it that I would award, for a successful essay, the prize now offered for Literature and Fine Arts.

What a pregnant theme for a medical essayist! Dr. Mead from his great experience as head medical officer of the General Hospital, could tell of hundreds of lives lost from sheer ignorance. Even laymen, who are at all read upon the preservation of health, can see it sacrificed daily.

Perhaps, Sir, you will plead the cause of this appeal.

Bombay, 7th October 1861.

TOM CRINGLE.

TO THE WATER-RATE ASSESSORS.

GENTLEMEN,—May I beg to address a few words of advice relating to the assessment of houses for water rate? This is a great liberty, but I mean kindly, and shall always be one of the first of my fellow

citizens in supporting all necessary and just taxes, of which I think the Vehar Water-rate one that all should most cheerfully subscribe to. There are complaints abroad that the assessors enter premises, and with very scant inquiry at once proceed to levy most oppressive rates, just as if there were only some thousands or so of water consumers to support the whole weight of expenditure incurred in this great and good measure of bringing the Vehar water into Bombay. Now I would most strongly advise that the first assessments for water be as light as possible, so as to encourage even householders of very moderate means to lay the water on to their premises. By a patient persistence in this mild policy no alarm will be created amongst intending consumers of the Vehar water; and those already enjoying the luxury will reassure the remaining portion of the public to "do likewise." Thus we shall obtain a maximum number of consumers whose aggregate water-rates will be something very handsome to put into the Municipal pocket. And if, after this "mild system" has had a fair trial, and the rate is not found to yield what it should do, by all means increase it. It should not be lost sight of, that nearly all the well-to-do classes have wells of sweet, water *on their premises* which they habitually used prior to the introduction of the Vehar water; others, if they have not the tanks, have the means, either by carts or bullocks, to bring it from the tanks and reservoirs of their friends. If oppressive rates are inflicted these people will again have recourse to the means of supply indicated, and will cease to use the Vehar water. In questions of a social and domestic nature like this under discussion, the native combinations are strong and lasting.

If it be true that the Municipal authorities have ordered out from England 5,000 water meters at an expense of nearly £6,000, I for one think that the money has been most wastefully expended. It may be stated in reply, that the public will have to pay for these when applied, to the service pipes of consumers. But before these can be applied they will cost the water consumers not far short of £10,000. This is wounding a man in the back, on which you wish to place a burden, with a vengeance! Is it known to the public that the mighty store of water in the Vehar Lake is only decreased ONE FOOT in depth by Bombay consumers and by evaporation from monsoon to monsoon, leaving *forty-six feet depth of water in addition* at their service unconsumed? And yet this world of waters is to be doled and dribbled to the public through expensive meters which will cause a world of ill-feeling and cost, from being either tampered with, or getting constantly out of order, as is the case with all meters. I trust that the whole of these meters will be shipped home again and exchanged for sluice valves wherewith to let our redundant supply of water into the foetid sewers of Bombay, so as to scour them clean, and let it be seen whether we cannot thereby create a current in that stygian dyke, the main drain, towards its outlet in the sea. Why hoard this bountiful supply of water whilst we are choked with dust in the streets, and our monsoon grassy spots are withered? Why should not the Bombay Green (Brown?) be flooded occasionally, and thus be made to yield a green carpet of grass pleasant to the eye and to the tongue of goats? I see no reason why the Esplanade should

not be treated the same way. The evening would be the time to do it, and if flooded once a fortnight the grass would look green and cheerful.

Gentlemen, a bountiful Providence has enabled us to store this magnificent lake of water for our use ; pray do no keep it lying idle in the *manger* of selfishness, whilst we have so many crying public wants uncomplied with. I beg to make my bow to you, and trust you will ascribe my remarks to no carping spirit.

What are our humane wealthy classes about ? Are there no nooks and corners in this giant city that would not be beautified and benefited with drinking fountains for your humble foot-going countrymen ? I do not mean the petty looking affairs we see so sparsely dotted about the streets. I allude to those possessing art pretensions, and which would tell future ages that we, in these days, had our Jejeebhoy's, Sunkersetts, Sassoons, Camas, Dinshaw Manockjees, Cowasjee Jehangeers, Bomanjee Wadias, Cursetjee Ashburners, and many others, who were benefactors to the public in their day. I will find designs of a handsome character if any public-spirited gentleman will apply to me. A fine bronze medallion on the front, giving simply the name of the donor and the year, would not look amiss when benefactors peeped at them through the stars above, centuries hence.

Bombay, 5th January 1862.

TOM CRINGLE.

ODDS AND ENDS.

SIR.—The merchants are quite right to complain of the want of harbour defences for this important city ; but without a fleet to keep off mortar boats the intramural portion of Bombay is as sure to go to pot, if they can once get within range, as is the sun to rise on that day.

The houses in the Fort give a very large target for mortar practice, whereas the mortar boat is a small stinging fly ever on the move, and most difficult to hit at $3\frac{1}{2}$ miles' shelling distance.

Yet the rage is to concentrate everything within the dangerous walls of the Fort. A day or two ago the *Bombay Gazette*, in an editorial which read exceedingly like a copy of Mr. Forjett's admirable scheme for improving the Fort Green, recommended that the proposed Victoria Museum should also be built into the plan to be adopted for the Green improvement. This is bad advice.

The Victoria Museum should be, not within the hot, dusty, dangerous walls of the Fort, but built at the end of a beautiful vista, and sheltered under the umbrageous foliage of the new Horticultural Gardens at the Mount. Situated thus, surrounded by handsome trees, with its preserved botanical treasures within, and the living flora without, what can be more consistent with good taste and artistic effect ? Who would not go to such a place to listen to a botanical *out-door* lecture on the living subject rather than to the dusty, musty Town Hall, whose

acoustic properties are so defective that at 10 feet from the speaker you can't hear a word spoken?

The *Bombay Gazette* also recently observed that, as the joke of making wet docks on the Flats had passed away, it might be better to utilise the soil by spreading the contents of the Main Drain over the Flats and to grow vegetables! I leave practical men to judge which is the best *joke*—whether to receive the whole mercantile marine into wet docks, where they would be not only out of sight but out of range of an enemy's fleet, and where there are 25,000 acres of land available for forming a new commercial locality open to healthy sea breezes, and where the residents would calmly laugh at an enemy who had not the power to force our shore defences with an army, and who, if they should succeed in dictating terms of ransom, even that would not be preferable to the ruin wrought in a bombarded, close-packed fortress. If my plan for wet docks on the Flats is a joke, any engineer must admit that it is a *practical joke*; whereas spreading reeking, cholera-giving carburetted hydrogen gaseous matter on the windward side of the city is a very *sickly joke* indeed.

Twenty-five years hence Bombay may mourn in sackcloth *and ashes* for not having adopted my scheme of wet docks on the Flats.

The *Bombay Gazette* also contained a short regretful paragraph that no one thinks of reclaiming Back Bay; but if inquiry be made the writer will find that there was a magnificent scheme for reclaiming and utilizing that long envied locality. But even gold may be bought at too dear a rate: so with the Back Bay site, to reclaim which, some large inlet of the Bassein River should be embanked off from the action of the tides, and the deep alluvial deposit removed to Back Bay by the aid of a double line of railway, four powerful locomotives, with two ditto in the repairing shed, two hundred and fifty tip waggons, together with workshops, and a staff of 1,000 men. ~ One earth tip-wagon will carry three cubic yards, and with strict economy earth might be tipped into Back Bay at one anna per cubic yard per mile over a distance of 24 miles, which would bring it up to Rs. 1-8-0 per cubic yard: and as each superficial yard to be reclaimed would require to be raised an average height of, say, 12 feet, it would cost Rs. 4-8-0 per superficial yard reclaimed. Even at this figure, with our want of room, it would pay, but not the men whose money and brains accomplished it. A sea-wall from the Lighthouse to Malabar Point would cost little less than a million sterling, which sum would be quite out of the question; and the only other plan left, is to run the present beach out. There is yet another quiet, slow-time method of reclaiming by means of timber groins placed on the slope of the beach; these arrest the whirling particles which, as in Back Bay, are executing a polka dance all round, in lieu of reposing within the limits of each groin, and thus pushing the natural beach seaward.

Let us have a parting word about the probability of any isolated heavy American frigate paying us a visit. The greatest need of the Federalists at the outbreak of their civil war was war vessels; those in foreign waters must have no doubt been called home months ago, when there was little

prospect of a war with Great Britain ; and the American Government could not but know that in the event of a war with England they would require all their heavy naval power to protect their enormously extensive seaboard, in lieu of frittering it about in the chance of finding our colonial harbours uncovered by British war vessels, of which we have ten to one as compared with the Americans.

A last shot at the houses in the Fort. They are the millstone around the neck of all defensive operations ; a dominant enemy with only two long-range mortars has only to show, he has the power to lay it in ashes, to dictate his own terms.

Bombay, 22nd January 1862.

TOM CRINGLE.

GYMNASIUM FOR NATIVE YOUTH.

SIR,—Permit me to offer a suggestion to our leading native friends, which is to avail themselves of the advent of Mr. McCollum in getting him to fit up a regular gymnasium for training native youth in athletic exercises. If this idea were extended to the erection of a permanent circus, I believe it would work a world of good in teaching equitation combined with gymnastics, for which the proposed circus could be easily adapted, and would pay a good rent by occasional hiring. It may not be generally known that a great many of the sons of the highest English nobility are sent to the leading circuses to be trained in difficult feats of horsemanship. In Russia the art assumes an element of military training for the cavalry branch of their army. At show reviews it is no unusual sight to witness a troop opened out in loose files with the troopers dismounted, when at the word of command the troop is started off by sound of the bugle at the canter; the men, clad in huge jack boots, high casque and cuirass running by the horse's side, when at the sound of the bugle all leap cleanly into the saddle without the aid of stirrups. When we see at Mr. McCollum's circus the little manikin Endre, only 12 years of age, run alongside of a tall horse at the canter and with his head about level with the girth, with one cat-like leap seat himself in the saddle, the attainment of the same feat by a trooper must in comparison be an easy task.

The late Emperor Nicholas of Russia caused all his sons to be trained in equitation at the public permanent circus at St. Petersburgh ;—an exception being made in favour of the Grand Duke Michael, whose training was conducted at the private circus attached to his palace, and it is no small praise to Mr. Buckley that the Emperor Nicholas personally selected him as his son's teacher, and from what I have heard he proved a first-rate pupil. Mr. Buckley was honored by Nicholas with frequent and lengthened conversations on the great feats performed by him when a mere lad, and this kindness must have assumed an agreeable shape in the presents received from the Emperor—one of which is a diamond ring valued at £300. Mr. Buckley found Russia so agreeable that he remained there 12 years, the greater part of which time he was attached to the Imperial Circus, which the Emperor used to visit three

or four times a week. Mr. McCollum's troupe was so highly patronized by the Emperor as to cause him to remain in Russia three years. I merely enter into these details to show our rich and influential native gentlemen that the art of equestrian gymnastics is held in high estimation amongst the noble and great in enlightened nations, and were the art cultivated here, their sons could not be better employed, say on each Saturday, by being withdrawn from mental school work for a good breathing in an equi-gymnasium. Twenty thousand rupees from twenty liberal patrons of muscular training would do the thing in style.

Bombay, 5th April 1862.

TOM CRINGLE.

TIFFIN FOR JURORS.

SIR.—By inferential remarks in "Tiffin's" letter on Sir Matthew Sausse, published in your paper of to-day, he thinks that I wrote the letter signed "Amicus" which appeared in your issue of the 3rd instant. I need not tell you that he is in error. I did not write the letter in question, nor any other reflecting on our Judges of the Supreme Court, for the simple patriotic reason that I highly venerate the whole Bench of British Judges as holding the proud position of being the most just and incorruptible body in the world. Englishmen have a fling at every institution of the state either for incompetence, jobbery, or corruptness of some sort or other; but who has heard even the faintest whisper against our Judges since about the Jeffery period? No one. Thus I make what I may call my "profession of faith."

But I quite agree with the writer on the "tiffin question;" and although I think Sir Matthew an excellent and painstaking judge, yet he is, in my opinion, a wretched physiologist in thinking that healthy men on the jury can go without food for any period a judge may dictate. Let me state my own habits as an example. I rise at 7 A.M., and having a very able stomach, which is not fretted by a rebellious liver, I do full justice to a meal of bread with iced butter and tea. As I think once a day often enough to take animal food, it will be admitted that my breakfast, being of a light kind, is very easily disposed of by a stomach that never shrank from apple dumplings and roast beef; and by noon the clock-work of my belly punctually strikes the hour of tiffin. By exerting a little mental firmness, however, we can defer our bit of bread and butter tiffin till one o'clock, and by great sternness and a high sense of duty in assisting the administration of JUSTICE (own brother to Miss MERCY) we can play the part of a Hindoo devotee till three o'clock, eight hours in this exhausting climate without food! Why this is a miracle of patient forbearance! Am I, then, a belly-god, as the caitiff "Tiffin" would infer? The fact is, I suppose, that Sir Matthew rises early in the morning to take, what is called, a constitutional; comes home, takes a nap (many people do), then a bath and toilette, and he sits down to an Indian patrician breakfast consisting of rich grills, spiced stews, tip-top curries, &c., of choice modicums which are comfortably deposited in Nature's retort to be converted into the gas of life. By 9-30, a gentle tritura-

tory motion is given to the stomach by the ride to the Court House by 10 A.M., when he enters with a grand flourish of trumpets and waving of flags, than whom none merit more than our British judges. But let us here cast aside the judge and view him as a man ; I have supposed him to throw down his breakfast napkin at 9-30, when he has enjoyed, two hours after my humble meal, what might be called a young dinner ! Under these supposed circumstances is it natural of Sir Matthew to ignore the want of tiffin, to ignore bread-and-butter-breakfasting-jurymen at 7 A. M.? This sun has its dark spots, and the anti-tiffin serenity of Sir Matthew are the only shady tints on his bright shield. If he would study physiology and the exacting nature of the gastric juices these would disappear.

Now, Mr. "Tiffin," I've a bone to pick with you for sneering stupidity. In the first place, "Amicus" did not question the patience or lucidity of our Chief Judge ; and although he be always courteous, has "Tiffin" never heard that "soft words don't butter parsnips"? Had courtesy ever any influence on a mutinous belly? Go to, foolish "Tiffin!"

On one occasion Sir Matthew ordered "Tiffin" and his fellow jurors some refreshment ; but does "one swallow make a summer"? Would that happy event console the cravings of my epigastrium twelve months later? Go to, foolish "Tiffin!"

"Tiffin" casts sly reflections on our piers, and dock schemes, and medicine societies ; but can he point out a rotten spot in these or anything else I have proposed for either beautifying Bombay or ameliorating the condition of its inhabitants ? He says "Sir Matthew deplored that Government did not seem to think it worth while to consider the wretched position in which sailors and others upon landing on this island," &c. &c. I sincerely trust that our Chief Judge said no such thing ; that is, in the sense of considering the "sailors and others" the victims of some froward fate over which they had no control.

If Sir Matthew will invite me to tiffin some day "I will a tale of horror unfold" as would make every hair in his wig stand on end. I served at sea for eight years when seamen were really good stupid fellows ; but the modern article has been so corrupted and demoralized by pseudo-philanthropical good, but mischief-making men, that he has become a mutinous, knife-drawing, loafing scamp. All the money in Bombay may be spent in building "Sailors' Homes," but, except to the very few good and steady men among them (men born to be good), they will always prefer the Duncan Road to the more decorous Sailors' Home. Many benevolent good men might well think that as such Homes have had a beneficial effect in England, they would exercise the same effect here, forgetting that the very cause of their seeking its shelter, in the case of nine-tenths of the sailors now on shore, was owing to the following causes which would not apply to England :—1st. Left here sick, or landed shipwrecked. 2nd. Lubbers who shipped as seamen but whom blue water proved to be loafers, and whom the captain managed to add to our fast increasing list of European paupers. 3rd. Mutinous bully-boys of the ship who want well flogging into

habits of obedience. 4th. Murderous bowie-knife scamps who are a curse to themselves and those set in authority over them. 5th. Mild officers of merchant ships who are neither use nor ornament on board, are more adapted for shepherds than seamen.

A word more. Why is this daily increasing nest of European pauperism allowed to remain on shore? If ships were forced to take away with them the same number of seamen they come out with, this increase in the numbers of destitute seamen now on shore could not have existed.

If there is no deportation law for destitute Europeans in Bombay the sooner one is made and put in force the better. One-half of them are insane from excessive drinking, no one will employ them, and goodness knows the railways would be only too happy to employ them in loading cotton into trucks up-country; but at the first jink of coin they heard in their pockets, duty, gratitude, obedience would be forgotten. Private charity, Mr. "Tiffin," has better work to do than minister to the wants of any but the 1st Class, and of these the one moiety should be sent home by the ship they were left by, and the remaining by the State.

Bombay, 5th April 1862.

TOM CRINGLE.

STARVATION ACCORDING TO ACT OF PARLIAMENT.

"Mother," said a country bumpkin to his worthy parent, "what did you and father do when you went a courting?" "Do, John! why we—we—Lord! what a question!—why we sat in the corner and ate cold turkey." "Well, see, that, now!" rejoined young Hopeful, "how things is changed!—Betsy Jane never gives me nothing but a bit of raw cold pickle!"

SIR,—The above anecdote was brought forcibly to my mind while reading in your journal the account of Sir Matthew Sausse's treatment of the petty jury on Saturday last. Things *is* changed, indeed! Until very lately a large basket of assorted biscuits was almost invariably placed on the table in the jury room about 2 P.M., and there was *always* a large chatty of water in the corner, though the Court could not afford anything better to drink it with than *one tin pot* for all hands. I have partaken of the said biscuits and water many a time and oft. On the very last occasion of my serving on the jury, and that not so *very* long ago, a substantial hot tiffin was laid out for us (as one at least of last Saturday's jury will remember), comprising beef-steaks, mutton chops, and sausages, with plenty of bread and cheese, fruit, &c., a bottle of sherry, and last, not least, a bundle of prime cheroots! Of all this we partook right heartily while "His Lordship" (I regret I cannot now remember *which* Lordship) was playing an excellent first fiddle to the same tune in his own refreshment room, thus making things comfortable and pleasant all round. In contrast with this, Sir M. Sausse's magnanimous and truly liberal resolution to "order some water for the Jury" stands out in refreshing distinctness. I think the least the Chief Justice can do is to order that in future the following clause be added to the summonses served on the members of the Petty Jury:—

" And you are hereby required, at your peril, to provide yourself with all fitting and necessary food, aliment, sustenance, meat, drink, or other refreshment, whether in the shape of potted beef or the essence thereof (strongly recommended), anchovy paste (preferred by some), biscuits thereon to spread the same, brandy-and-water (refreshing if not diluted beyond half-and-half), or in such other form or of such other material as you may, after due consideration, prefer; together with the necessary pocket-flasks, clasp-knives, and other utensils, whether of delf, glass, or metal, convenient and proper for the due demolition thereof, and such cheroots, cigars, or other preparations of tobacco, whether of Manilla or Trichinopoly manufacture, as may be required to promote a healthy digestion, and the consequent finding of a true verdict according to the evidence."—Yours obediently,

10th April 1862.

TOM CRINGLE.

LORD ELPHINSTONE.

SIR.—In the *Bombay Gazette* of the 10th instant an editorial was given on the political career of Lord Elphinstone during the period he has been Governor of Bombay. The article is written, I admit, with an honest desire to be just and impartial; but as I do not think that justice has been done to Lord Elphinstone's administration I will, with your permission, touch generally on the subject of Public Works in general.

I have neither the material nor ability to do justice to this subject, and can only string a few facts together for abler hands to deal with.

Soon after his Lordship's arrival in Bombay, the Burmese War put an end to all suggestions for public works; then succeeded the partial suspension of public works from poverty and the increasing public debt, followed by the order limiting any work being executed by the subordinate presidencies to a sum not exceeding Rs. 500. Then came the Persian War, followed by the black long night of the mutiny. Since when it is nearly treason to ask for money for public works. But during this long, adverse, thorny path of poverty, war, and rebellion his Lordship must not only have been the warm advocate for the construction of public works, but he must have worked hard and zealously to have accomplished what he did. In the case of the Vehar Water Works he not only had to fight a tough battle for the sanction of this magnificent work, but he had also to reason and convince the then Board of Conservancy that the work was essential to the health and growing wants of our increasing city. It is said that nothing has been done in the way for piers, wharves, and docks; but it should not be forgotten that even here his Lordship must have pleaded hard for such works as to have induced the Home Government to engage the services of the first Engineer of the age to visit Bombay to inspect and report on the eligibility of public works recommended by Lord Elphinstone, and we can now only lament the death of that great and good man, Robert Stephenson, that plans are not now before the public of the most pressing of our wants, viz., pier or dock accommodation, with a new Custom House

site. We must not lose sight of the fact that to Lord Elphinstone we owe the commencement of the Harbour Defence works, under the able superintendence of Colonel Scott, of the Engineer Department. The address to his Lordship did not express a tittle more than due praise for the readiness with which he more than half way met all works of private enterprise having a tendency to benefit the public. Let me now ask, what the citizens of Bombay have done to forward to performance the public works they complain as not having been completed? Have they ever sanctioned, by public meetings or by petition, the urgent necessity for the erection of public works? I say no. They have never strengthened their Governor's hands by that pressure from without, in the absence of which both the Governor General in Council and the Imperial authorities at home might justly conclude that his Lordship was asking for expenditure of money on works, the necessity for which existed only in a fugitive paragraph or two in the newspapers. The public of Bombay cannot escape this stigma of indifference to the public necessities. We have stood idle by, whilst our late Governor exerted all his efforts to do us good, without our raising one cry of necessity to give force to his demands in our favour. Let us hope that his Lordship will recover health and strength at home, and when the time shall arrive be appointed Lord Canning's successor. A man who has governed two presidencies for more than the usual period, and with far more than the usual success, cannot but make a good Viceroy of India.

Bombay, 12th May 1862.

TOM CRINGLE.

THE WOUNDED GUIDE.

SIR,—In November 1845, duty called me to the valley of the Malsej Ghaut, where, at the village of Koobee, I encamped for a period of six weeks in making explorations in search of what I did not find. But, on the other hand on many occasions, I found what I was *not* in search of, such as large snakes, *inhabited* tiger lairs, and, lastly, a face to face meeting with a large bear. I had two native guides following behind me at the time, and as the ground was covered with stones we all armed ourselves with this ready artillery. I gave the word Charge,—and we all poured in a volley of trap grape, which routed Bruin ignominiously.

But, gentle reader (as the novelists call you), the above is only a chronicle of “small beer” just to introduce “my story,” and to show you that the neighbourhood was “na cannie” to be out int he still hours of the night.

I had often noticed that one of my guides had some very deep wounds just below the shoulder blade, and others of a like character and size about the nipple of the breast and below it. I frequently asked him as to how these were occasioned, but he always laughed away inquiries of this sort, and being a rather *daft* fellow I let him have his own way ;—the more so as he was a keen woodsman. One day, how-

ever, the guide in question was with me and my own sepoy in a very tigerish looking locality, and after I had returned from taking a drink of water from a noisy water-rill (which, by the by, is the womb of the River Kaloo, and flows into the Callian River), the sepoy took off the pugree of the scar-marked guide and showed me equally bad scars on the fore-top of the head. It turned out that during my absence the old sepoy had wormed out of the guide the whole history of his scars, and which he related to me as follows:—When Cushna (the guide's name) was a lad about ten years old he was keeping watch, with another boy about the same age, over a large herd of grazing cattle (in the very spot we were then sitting). Whilst so engaged he heard a loud, savage roar, and in a second he was knocked down by a scalp-tearing wound on the head, and then grasped by the breast and shoulder blade, after which the tiger stood defiantly wagging his tail, looking at the boy's companion. These little fellows invariably carry a long bamboo when herding cattle, and the bold little fellow, having recovered from his first fright, grasped his bamboo and lustily laid on his sweeping stroke upon the tiger's head! This is certainly the most plucky thing I have ever heard of; but alas! the poor lad paid dearly for his heroism in trying to rescue his comrade, for the exasperated brute dropped his prey, seized our little hero, and went off and breakfasted. It was thus my guide was wounded.

TOM CRINGLE.

DEATH IN THE POT.

SIR,—It is my firm belief that not a few deaths occur in the ranks of European life in India from copperas poison induced from copper cooking utensils. It is to the great number of coppersmiths, who ply their trade in every large city in the East, that we owe our exclusive use of copper cooking utensils, a most objectionable practice, especially when enamelled iron-ware, now universally used all over England, is so plentiful, cheap, durable—and, shall we add, so worthless to the copper-cooking-pot thief of India. We were going to say some harsh things of these clever rogues, but forbear in consideration of some of their light-fingered clan having eased us of our pots, pans, and kettles at one fell swoop, since when we have made acquaintance with wholesome iron-ware, and dropped acquaintance with the doctor.

Many people in the jungle, far from the tin-coating craft, have no doubt fallen victims to copperas poison when cholera bore the blame. It is not even suspected in many European households that the dinner curry or Irish stew are made by cooks early in the morning and stood by; any acids that may be in either of the above messes then begin to act on the metal of an imperfectly tinned pot, and the oxyde of copper is at once intimately mixed up for the unsuspecting recipient, when loss of health and impaired digestion follow,—and in bad cases death itself.

Poona, 31st July 1862.

TOM CRINGLE.

LIQUOR LICENSES.

SIR.—Not a hundred and thirteen miles from Bombay let us suppose the following case to have taken place between A and B. The former establishes an hotel—let us say a family hotel; it is well patronized, because well found in all the essentials which minister to a traveller's comfort.

B has scraped together, say Rs. 11,000, and says “there is a bungalow to let at a corner not far from A, which will be just the thing for an hotel. I will go in for farming the liquor licenses, give it a license for a nominal sum, and although these licenses only cost some three or four pounds sterling in England, yet, as I am armed by the Government with the Venice law of exacting my bond, and being also authorized with the power to exact as much money as I like for a liquor license, I will lay on an impossible sum, say eight hundred rupees, which may make A shut up his hotel; or, at all events, he will either have to pay me a snug nine per cent. for the whole sum I have invested, or his guests, not being able to obtain a glass of wine or beer to their meals, will gradually fall off and come over to my rival establishment.” *Bote acha ! !* Poor A offers, let us say, Rs. 400 for a license, but B, Shylock-like, demands his “full pound of flesh.” A tells his astonished guests that neither beer nor wine can he let them have. The Government could never have contemplated an abuse of power such as I have described, yet I have barely related an actual fact. The remedy is very simple. Let the Government grant licenses to hotels for a general fixed rate as in England, and then farm out the native grog-shops, where the poor English soldier gets his surreptitious bottle of Mowrah spirits, which, perhaps, engenders more crime and does more harm to military discipline than the poor Rs. 11,000 multiplied ten times over will atone for. These grog-shops want a sharp eye on them, and I should say a Parsee Shylock is just the man to invest his money in so profitable a speculation. But that such a practice should give the power to ruin a landlord, and indirectly to deprive a large number of ladies and gentlemen of a glass of wine or beer, is almost incredible. Would such an unjust investiture of power be for one instant tolerated in England? I pause for a reply! which, between us, most indignant reader, I don't think I shall get. But, nevertheless, I place such unbounded faith in the honest dealing of all English authorities that I hope to see hotels (the weary traveller's home) rescued from the hungry grasp of a liquor licensing farmer.*

Poona 20th August, 1862.

TOM CRINGLE.

SISTE VIATOR.

SIR.—Do you know any clever doctor who can safely render passengers insensible, so as to make them capable of enduring the fatigue of travelling in this exhausting climate from “morn till dewy eve” at the

* The Government at once authorized the Collector to issue licenses to hotels.

rate of 20 miles an hour? A good mesmerizer would not be objected to! Over the whole range of stations, from Bombay, North-East, to Julgaum (and presently to Bhosawul), a distance of 275 miles, there is not a single place where a modest woman can go in to partake of refreshments, or to enjoy any toilette convenience. This will never do. There are cases where it may be desirable to remove sick passengers from distant places, when, under existent circumstances, I am confident, their lives would be risked from the unrelieved fatigues of travel.

There are at many of the stations along the line a species of *Shebeen*-house where bad liquor, worse beer, and execrable cookery are offered to the weary, with the chance of a life-long rheumatism from damp beds. This latter risk is somewhat lessened by an active hunt after F sharps and B flats. But in none of these could a petticoat, of even coarse texture, take shelter. Notwithstanding the poverty of accommodation the charges are not toned down to accord with it. On the contrary they are extremely high. Soda-water 4 annas; dinner (a spitchcock, sudden death dinner you know) 2 rupees; lunch, one rupee; bottle of beer 8 as. (all the beer sold is damaged and can be bought in Bombay for Rs. $3\frac{1}{2}$ per dozen); cup of tea 4 annas; bed 2 rupees; night lamp 4 annas; cool water bath, in a large gindy, 4 annas. These prices were paid by the writer in *jowly*-roofed huts, bare clay floors reeking with wet, with large prize rats dancing the burlesque polka above the cloth-ceiling, lizards running on the floor, with lots of the *nipper* tribes in Bedfordshire. These are some of the fruits of leaving railway hotel accommodation to "private enterprise"! Private fiddlestick! Private enterprise, so far as hotels in the Mofussil are concerned, are filthy sewers of dirt and mountains of high charges.

I have now to suggest that the G. I. P. Railway Company at once take this matter up, and build large and commodious hotels at the following places:—Egutpoora, Bhosawul, Hurdah, Sohagpoor, and Jubbulpoor; also at Budnaira and Nagpoor for the North-East line. For instance passengers would leave Bombay at 6 A.M., lunch at Egutpoora (85 miles distant), and dine and sleep at the "Railway Arms," Bhosawul (190 miles distant from Egutpoora). Passengers for Jubbulpoor would leave at 6 A.M., lunch at Hurdah (139 miles), dine at Sohagpoor (82 miles), with refreshments and sleep at Jubbulpoor (the total distance 338 miles), would try the metal of even a strong man to travel it. It also becomes a question whether, over such long distances, passengers would not sooner pay for more speed than be wearied to death at 20 miles an hour. Now, I don't hesitate to say that, were the Railway Company to build hotels at the places named, they could let them at a large profit, and if the proper men are selected to conduct them, a large fortune, gathered from moderate charges, would be his certain and happy lot. All the landlords should be under the *surveillance* of an officer of the Railway Company, until he, by unexceptionable good management, obtained exemption. Something must be done. Who is to do it?

Bombay, 7th October 1862.

TOM CRINGLE.

HORRIBLE ADVENTURE ON THE THULL GHAUT.

SIR,—I had been long suffering from rheumatic attacks for which I had visited Bombay from Mhow in the hope of some alleviation or cure ; but I had scarce settled down there with my wife and two little ones ere the mandate of my medical adviser dictated a retreat to the Deccan, and with his concurrence I selected Malligaum. I, therefore, sent off our bullock dumney to Kurdee, at the foot of the Thull Ghaut, to meet us when we should arrive by the train. After packing ourselves very snugly we commenced our journey, and, as the weather was close and sultry, we folded back the canvas covering from both ends of the dumney, by which means we were enabled to obtain a magnificent view of the bold, gigantic ravines, whenever the fitful clouds left the moon unobscured. We had chatted with our dear little ones until they dropped off to sleep : the last words of Tommy (aged 7) were that he was going to drive the bullocks on the morrow, and papa and mamma and Susan should see that he did it much better than Rama, our driver. Thus we ascended the fine road up the Thull Ghaut, catching now and again glimpses, half thrown into shade and half made brilliantly bright, of gigantic viaducts, bridges, and mouths of tunnels which looked like the entrance to Polephemian caves. Jogging along thus in chat with my wife we reached the summit of the Ghaut, where Rama claimed a rest for his bullocks, and as I felt unusually drowsy [I murmured an assent, and had scarcely done so when we heard a rushing sound among a drove of cotton pack bullocks then passing, and before we could divine the cause, a tiger sprang into the dumney by the open end. I felt a gush of pain in my thigh as the brute, impelled by his spring, rather fell forward than leaped on to our bullocks ; but they too, it appeared, must have heard the noise from the pack bullocks, as they had started off in frenzied terror towards the edge of the great east and west ravine. But the terrible foe was quicker than they. With a growl like muffled thunder, deep and determined, he had fastened on the neck of our off bullock, when both in mad terror bounded with high buck leaps towards the ravine, the western gullet of which we had caught such magnificent views on our way to the summit.

Thus from fancied repose and security to imminent danger took place so instantaneously as to leave no time for reflection, still less for escape. Strange to say, the children did not awake amidst the infernal din made by the agonizing screams of the bullock the tiger had fastened on, and the snorts of terror emitted by its yokefellow, poor Lalla, coupled with the half-smothered inspirations of the savage brute, with its mouth buried deep in the broad and massive neck of sleek, good-tempered, Mowra. To these were added fearful cries of warning from our driver Rama, who, forgetting in his solicitude for us his own injuries, and likewise that we were incapable of helping ourselves, shouted in vain. My dear wife instantly comprehended our perilous position : with one arm mutely thrown over the sleeping children and the other around my neck we, with greater calmness than I could have imagined people to possess when impelled to certain destruction, awaited our doom. We

had not long to wait, hanging, as we were, on the tenter hooks of helpless despair, for scarce a minute appeared to have elapsed from the commencement of the tiger's leap ere they went over the edge of the ravine, dark, murky and uncertain like an unfathomable abyss. My wife gave one hopeless scream of despair, and we sunk into what appeared to us voidless space. Within less than a half second of time came a concussion that made me feel as if my spine was being dug out from the muscles of the back ; I then appeared to have fainted or to have fallen into a short state of syncope, for what could have been but a second of time only must have elapsed, when reason and consciousness resumed her power. Wonderful tenacity ! The tiger was still fast to the throat of the hapless bullock. It turned out that our fall had not been far down, as a tree growing in an inclined position on the slope of the cliff had arrested our descent by the dumney falling on one side of it and the bullocks and tiger on the other. Thus we were suspended in mid-air, depending on the lashing of the neck yoke to the pole from certain annihilation. I could not make out how the tiger could still maintain his hold of the bullock, until a glint of the moon revealed a jutting bank on which he was standing on his hind legs still draining the life-blood from our poor draught beast, whilst his yoke-fellow, Lalla, was in the last desperate throes of strangulation, and I was fearful he would end in breaking his yoke strap, which, by destroying our equilibrium, I feared would hurl us to the fathomless depths below. After a while the dying bullock yielded up life by a kick on the tiger's belly, which so far disturbed his footing on the rock as to cause him to fix the long talons of his hind feet on the belly of his victim. In a second a parting crash of the dumney pole, from the increased weight of the tiger hanging to it, showed its fibrous splinters as they flew upwards that the crisis of our fate had arrived. We all instinctively read our fatal doom ; I had scarcely muttered an inward heartfelt prayer for mercy ; my dear wife exclaimed " Oh, my children !" when down, down, we sank with a rushing sound through the air like the swoop of the eagle for his quarry. A mighty shock followed, which just left consciousness of a life annihilated ; I appeared to sigh out my soul from its clayey, mangled, tenement, when my wife shook me by the arm, saying " Robert dear, what horrible groans you have been making in your sleep ; I am afraid you took more than your proper dose of laudanum." I gradually awoke. A night bird was uttering a shrieking cry, which sounded like " sold ! sold !" The dumney was on its way thumping into the ruts, the joltings from which nearly caused me to bite my tongue off when I attempted to tell Susan my perilous night dream.

Malligaum, 19th July 1862.

TOM CRINGLE.

BRIDGE APPROACHES—THE MAZAGON BRIDGE.

SIR.—Let not the public suppose for a moment that I presume to impugn the judgment given by the Supreme Court yesterday in the

suit between the Great Indian Peninsula Railway Company and the Bombay Municipal Commissioners as to the liability of keeping the approaches to the Mazagon and Byculla bridges in repair. I merely want to point whether the cunning of the non-legal mind differs from the legal, or how equity differs from law.

In the case under judgment I will relate what took place in 1850, when the G. I. P. R. laid out their line through Byculla, and it was "to be or not to be" as to whether the bridges should be built, or whether the public should be content with level crossings, on which question J. J. Berkley, Esq., the Chief Resident Engineer of the G. I. P. Railway Company, on the one side, and Mr. H. Conybeare, the Surveyor to the Municipal Board, on the other, joined issue.

Mr. Conybeare fought tooth and nail to make the Railway Company erect bridges, and no doubt thought the opportunity a good one to make the aristocracy of railway engineers knock under to the opinion of a "Superintendent of Repairs and Surveyor to the Court of Petty Sessions." In this he succeeded, and the Government decided that bridges should be built, notwithstanding the professional arguments adduced by Mr. Berkley in favour of level crossings. Thus the Railway Company did *not* build the bridges "for their own benefit" as argued the learned counsel for the Municipal Commissioners, but utterly against their wishes; and the non-legal mind can only infer that the Municipal Board accepted the bridges, and their approaches, as preferable substitutes for level crossings, up to the very margin of which they would have had to keep in repair had the fiat been issued against building the bridges.

To people living north of either of the Byculla or Mazagon bridges, the accommodation they afford to the public against the oft-recurring detention attendant on level crossing, puts them beyond comparison with each other; and, after the Municipal Board had accepted the charge, and executed repairs to the bridge approaches for a series of years, as a matter of common sense obligation, it must have been a stunner to the G. I. P. R. to be told that the duty of repairing a common highway, over which they could hold no jurisdiction, rested with them.

Perhaps if the correspondence relating to the building of the bridges had been put in as evidence to show that the decision was *forced on* the Railway Company, a different judgment might have been given.

It is very remarkable that no examples were cited of identical cases in England, where railway companies have to make bridges over roads like those at Byculla and Mazagon. The practice in England is, I think, for the companies to build the bridges and approaches; and, after maintaining them for twelve months, to hand the latter over to the parish authorities for ever; but the railway companies always keep their bridges in repair. Surely there are many engineers here in Bombay who could quote from actual experience.

The argument used by Mr. Westropp was that the case under consideration was similar to that of the "King against Kerrison" in which indictment a charge was laid against the defendant for not repairing

a bridge constructed by him over a canal. In that case there was judgment for the Crown.

I should think no one in his sane senses would expect a different decision, as passengers could not get over Kerrison's canal except by the aid of Kerrison's bridge. But had the Railway Company been permitted by the Government, through the Municipal Board, to make level crossings, they would have ceded to the public a right of way across their line of rails. Therefore I do not think the comparison just, and also think that Mr. Anstey was quite right in saying that (legally speaking) there could be no bridge without a river (or canal).

Bombay, 15th April 1862.

TOM CRINGLE.

PUBLIC CONVEYANCES.

Sir,—The public will rejoice to hear that something is at last to be done for the regulating public conveyances. Will the committee of the Legislative Council, who have this matter under reference, call witnesses? If so I am their man, at least one of them. It is not very creditable to the port officers of Bombay that rules have not been framed to give facilities for hiring boats at the various bunders. At present the first thing a boatman does on your inquiry for one, is to ask where you are going. If it likes him not he says he is engaged, and so on of all the others. In fact their sins against law and order are such that for them to do right is the exception. I often have a quiet laugh at the blunders made by magistrates and law-makers when the regulating remedy is so obvious and simple. Here are some which I think would checkmate the cheating and lying dingywalla :—

1. Every boat to fly a number flag, 18 inches by 12 inches, fixed to a bamboo staff seven feet above the stern post, which shall be hoisted from 6 A.M. to 7 P.M. Give all dingies low simple numbers relating solely to such boats that their numbers may be readily distinguished and remembered.

2. The harbour master to lay down moorings to which all dingies at the bunders shall make fast in line abreast. A similar mooring to be laid down astern of these for the monthly engaged ships' dingies, none of which, while so engaged, shall fly any flag but that bearing the ship's name for which she is engaged, the termination of which engagement should be notified to the port officer entrusted with their supervision.

3. The fares of dingies to be regulated by the number of men employed at the time of hiring, and, as now, for time or distance.

4. Each boat to be provided with a canvas, or double dungaree awning, to be kept in repair. Boats' sails to be kept in efficient repair.

5. When any person who comes to the bunder wishes to hire a boat, he shall be at liberty to select the one he prefers, and which he will name to a *sailor sepoy* employed on the bunder to keep order and discipline amongst the dingywallas, who shall call out such boat from her mooring, and see her placed in an orderly manner for the hirer.

6. A large board to be erected on each of the bunders with the rule and regulations, fares, &c. &c., painted thereon in English, and in the language of the boatmen, for the guidance of both boatmen and hirers.

7. All ships' boats and other native boats in waiting for their officers, &c., to be moored in line away from the bunder.

8. All seaward approaches to and from the bunders to be kept clear of row-boat stages, and the hundred and one lumber tubs which now literally choke up the approaches to them.

9. A shelter house to be built on each bunder for dingywallas, and a small one for English sailors whose boats are in waiting.

10. Build a subdivided house which shall serve all the staff purposes of the customs, police, and commissariat. Put on a cast-iron tank for roof, and pull down all the ricketty old tenements which now stand in the centre of the bunder blocking up the approaches.

11. Light up the bunders by good substantial lamps on the Apollo and Mazagon bunders, and give each a ruby lens light for an approach light on dark nights.

12. The buggywallas! ! Without any undue exhibition of egotism I may be allowed to boast that I am too old a coon to be taken in by promises of amendment in the improved state of their horses, harness, and buggies, as was our late Chief Commissioner. Mr. Forgett *must* have known that these dingy pie-crusts would break in less than a week after they so foolishly saddled the community of Bombay with buggy rates increased one-half! Where are the promised amendments now? The great oversight committed was in not classifying the buggies, with power to degrade to a lower, or raise to a higher, class buggies which may be badly or well found, with fare-rates to correspond to the classes. A bad horse requires as much food as a good one, which fact, together with the class-fares, would act as the true lever of improvement. But in fixing fares for buggies I would revert to the fares existing before the "Crawford improvement period," which would put the 1st class buggies on the fares they now revel in (equal to London Hansom fares), and the 2nd class would be again put upon the old *pre-improvement* fares. And I think there will be no difficulty in making a 3rd class amongst the Autolicus's. But oh! use your pen to induce future law-makers to strike out that "did-you-tender-him-the-proper-fare?" clause. Of all the stupid unworkable legislative clauses I have ever known this one beats all. By a lucky coincidence I saw this clause at work the other day in a most ludicrous manner. A respectable middle-class native sent his servant for a hack buggy. The man was away for an hour, he called many buggies, but, like Glendower's spirits, they would not come for him. His former efforts were north of his master; he now went south, and after a while he induced one to come to his master. But the cunning Jehu arming himself with the shield of "did-you-tender-him-the-proper-fare?" pulled up at 100 feet distance to open a parley as to where his proposed fare was going? How long did he intend to stay? What would he give him? In vain the passenger told him he would give him the *proper fare* (one-third over-rated already). No, he declined the hiring! I tried to lure him nearer so that I might trip

him in the meshes of the law. But, like a crow at sight of a gun, this alarmed him : so he drove off to the accompaniment of the " Devil's Tattoo" on the bare ribs of his miserable horse, himself tripping a lively saraband on the footboard.

Hang a repudiating passenger if you will, but oh ! expunge "did you-tender-him-the-proper-fare?" from the statute book.

Bombay, 2nd February 1863.

TOM CRINGLE.

HAUD YER GRIP.

SIR,—The heading of this letter, I trust, will be the Honorable Mr. Scott's motto in dealing with the cotton frauds. The proposed bill by Mr. Scott very wisely holds the cotton pressowner answerable for what comes from under his presses ; this should have been law ten years ago. The native members of Council think that the Government is sufficiently armed by the law already without Mr. Scott's bill. I beg to say No!—ten thousand times No ! Make every cotton press take out a license, let a *press mark* be allotted to him, and make him responsible, in very heavy penalties, for the freedom from improper matter of every bale he turns out ; I recommended this twelve months ago. When press-owners, as are the firm of Ritchie, Steuart and Co., to which Mr. Michael Scott belongs, propose such a bill, surely there can be little inherent hardship in its clauses. Therefore I say to Mr Scott, "*haud yer grip* of the pressowner ; you have the *right sow by the lug*" ! If ye let him slip away, the old game will be played over again. The bunder scavenger, as of old, will hire presses to press the veriest rubbish, as in the late wool-pressing case. Upon my word, Mr. Editor, this nice, little, sensible clause makes one hope for better things even in law making.

Bombay, 6th February 1863.

TOM CRINGLE.

ROT IN WALLS.

SIR,—Every one in Bombay must have observed the walls of houses, as well as boundary walls, to be stricken with a leprous-looking decay of the mortar, reaching from the level of the ground up to four or five feet high. This is caused by the presence of salt, which, having a great affinity for moisture, welcomes the latter as high as it can climb behind the plaster wherewith the walls are coated. The sun also plays a destructive part ; for, whilst the salt invites moisture to ascend, the sun converts it into steam, when down comes mortar, salt and all.

I have been lately much troubled with this wall scab (let us call it), but only for about eighteen inches high. Whenever I white-washed or colored it the thin coat flaked off again when exposed two or three mornings to the sun. I had it replastered about six months ago, but it was only cured for a time. At last, bearing in mind that fine, healthy,

old English proverb, "a thing well done is twice done," I chipped off all the gangrenous part, washed it plentifully with fresh water, and then plastered with Portland cement, which in one day turns to stone, and will defy either rain, sun, or salt to affect it. Houseowners often have the chunam break up in places near doors from the concentrated tread of feet. Portland cement is a sure and durable cure for this evil.

Again, Mr. Lucullus builds a fountain basin; if the jet is high and powerful it falls pattering on the lip of the basin, and after a little while the plaster is seen to peel off. The sun is the offending agent in this case also: thus, the chunam plaster, from the long continued wet incident to fountains, allows wet to penetrate under the skin. The fountain jet has ceased to play, and the sun seizing its opportunity pours down its scorching rays on the part, converts the hidden moisture into steam, which disintegrates the plaster; the jet again throws about its merry pattering drops which this time eats a hole in the plaster. In lieu of using chunam plaster to finish with, get a cask of Portland cement (Roman cement is too long in drying), and mix enough fine white Muscat or Surat lime to colour with, add a little soap, and I'll warrant your fountain lip to be hard as adamant and white as the spotless snow of Ararat!

But stop, friend! I have been teaching you to cure "wall scab;" but what shall be done to the wretches who cause it? Aye, whose evil deeds *depreciate every house built in Bombay one per cent?* How? says the reader. This way. All the sand used in mixing with lime for building purposes is composed of rather large grains of disintegrated trap and basalt rock with their imbedded crystals. This sand is to be obtained in large quantities in all the rivers of Western India. Those who gather it for us Bombay folks generally get it from the Tannah River, a mile or two above Bombay. The boat is allowed to partially ground on a sand shoal, of which there are a great many on the eastern side; and when the tide has so far receded as to reduce it breast high, half the crew go into the water with small baskets with which they quickly dip down under water, scoop the sand in, rise up and hand it to a man on the gunwale, who empties it into the boat. Whilst the sand is being thus won, the brackish water, which flowed into the river from the harbour has again flowed out, leaving only the fresh water due to the natural outpour of the river. Thus the boatmen get the sand free from salt, or (speaking in the emasculated language of the day) there is a total absence of saline particles in it, and in which state we want it delivered. But what do the boatmen do? They draw alongside a beach, pier, or bunder, and pitch the whole cargo of sand into the salt water of the harbour on purpose to escape any delay attendant on delivering it direct from the boat to the shore. But as the plan in vogue necessitates a second filling and lifting after the salt tide has receded, I do not see that any appreciable advantage is gained, although a most serious and widespread mischief is generated. This is a most important matter, which, I trust, the Government or some member of Council will take up; a clause in our municipal law will meet the mischief admirably. A fine of Rs. 20 for *each case* on every owner of a beach, fore shore, bunder, pier, lighter, &c., who permitted the practice,

and a like fine on the owner of the boat *for* doing it. This will checkmate the beggars ! I find an "air-drawn gallows" floating down the current of my wrath ! I am, therefore, getting too Draconian for offering further advice on this most vital point, especially now that we are on the eve of building a new city on the Flats and another on the Esplanade. Many lime-burners also slake their kilns with salt water ; this injurious practice should be put down with a prompt and rough vigour. How things are miscalled ! If a corrector of abuses seeks for a check to rascality, he is interfering with the "liberty of the subject" forsooth, whereas he is only dealing a back-handed fall to the villainies of the devil !

Bombay, 7th February 1863.

TOM CRINGLE.

BURNING THE HINDOO DEAD—A LUMINOUS IDEA.

SIR,—This subject has created a lively discussion in Bombay, and the belief is general that the Hindoo custom of burning their dead is best fitted for a tropical climate. It is thought by many that had Mr. Tristram's Bill embraced or shown a *practical* method of cremation, the native members of Council would not have opposed it, but would even have welcomed it as a change in the right direction.

Without knowing exactly the practical objects which the bill contemplated, I may be excused for suggesting a plan which, while respecting the custom of the Hindoos, would at the same time satisfy the non-Hindoo inhabitants of Bombay. The chief objection urged against the present imperfect method of burning the dead, is the alleged effluvia from the gases evolved in the operation. Let us conquer this objection, and opposition must immediately cease.

My plan would be to erect a blast furnace in the neighbourhood of the proposed gas works. In the furnace would be erected, say, twelve retorts, in the interior of each of which should be a gridiron to slide on bearers fixed in the interior of the retort. On the completion of the funeral ceremonies in an adjoining apartment built for the purpose, the corpse would be brought to the mouth of a retort (the door of which would be thrown open), the grating drawn out, the dead body placed thereon, the door closed again, and in ten minutes all that would remain would be a handful of ashes, which could either be placed in a sepulchral urn, or swept into the ash pit, at the option of the friends of the deceased.

Is our operation faulty ? "Yes," say our chemical critics, "for you still liberate the gases of the bodies to poison our atmosphere, as at present. Is this your boasted plan?" Stay, friend ; not so fast in drawing conclusions. I have not shown you an educt pipe fitted to each retort which conducts the carbon-loaded gas into the purifier, from whence to be conducted into a gasometer ! It is said that many of the poorer classes of Hindoos are unable, from their poverty, to purchase

wood fuel, now become so expensive, for cremative purposes. Keeping this in view I wish to make my plan a self-paying one, and this could only be effected by selling the gas thus collected for illuminative purposes.

Estimated Profits of this Plan.

The number of native dead subject to a cinerary process in the Island of Bombay is about 25 per day. Each body, it is estimated, would yield two hundred cubic feet of gas—many would yield much more. Now 6 Rs. per 1000 cubic feet would be a moderate charge; therefore, in a monetary point of view merely, the scheme would pay.

Fastidious people may be shocked and startled at the scheme; but on what reasonable grounds? Is a man of mark, whose whole life has been devoted to the enlightenment of his fellow countrymen, to be quenched from our sight for ever by the fell stroke of death, and leave not a scintillating ray behind? Forbid it, economy and common sense. Does it cost nothing, think you, to clothe the ribs with rich store of carbon, that it should be afterwards wasted in the desert air—the very marrow of our complaint? Would it not create a sweetly mournful feeling in our breasts to see that, although our friend be dead, yet, meteor-like, as in life, he was shedding an effulgent ray to dispel the darkness, before seeking the glowing galaxy of light in the other world? The first Napoleon bade his chemists make nitre from the bones of the Parisian dead. Is it so strange, then, that I should propose to make gas of the Hindoo dead? Patriotic Englishmen have willed their dead bodies to the dissecting table. May not we expect a corresponding patriotism for the gasometer? Should the English in India ever abandon the objectionable custom of depositing their dead in the earth, I, Curtius-like, am ready to leap the gulf of prejudice into the gasometer! That is if I am alive at the time of change. No, that's a bull—I mean if I am dead. Is it not more honorable to shine as a gas-light than to stop the mouth of a bunghole as vulgar clay?

Bombay, 9th February 1863.

TOM CRINGLE.

EXPOSURE TO THE SUN.

SIR,—I would ask is moderate exposure of the human body, and especially of Europeans, to an Indian sun hurtful to health? I should like to see this subject well ventilated in your columns. As far as my own personal experience extends, I am decidedly in favour of exposure to the sun's rays.

I have also had this opinion under observation for some years past, and feel persuaded of the fact, that, without exception, I have not known one man who carefully shuts himself up from the sun who enjoyed good health; on the other hand I see, on every side, men in robust health and spirits who pursue an opposite course. European women in India think it death for a sun-ray to touch their cheek; let the overland route reveal the result.

Plants languish when deprived of the beneficent sun's rays ; why should man not also deteriorate under like circumstances ? God made man and beast capable of bearing exposure to the sun ; then how can this law of nature be evaded without penalty ? Who shall say that the sun's rays do not exert beneficial chemical effect on the blood ?

The late lamented Lord Elphinstone shut himself up from the sun more than any one in India I suppose. We all know that his health was always weak, and I firmly believe that this sedulous seclusion from the sun hastened his death.

I trust that some of your readers will give us the benefit of their experience and observation.

I notice that the classes of mankind most exposed to the sun have the finest health, viz., the Arabs and other eastern peoples, especially carriers of grain, &c., the muleteers of Spain, the guachos of the Pampas, sailors, European sportsmen in Asia, &c. &c.

Bombay, 19th February 1863.

TOM CRINGLE.

FRERE TOWN.

SIR.—On reading the objections raised in the last issue of the *Saturday Review*, which were also endorsed by yourself, as to the style and position of the proposed buildings to be erected on the Esplanade, it has occurred to me that the objections against the proposed plans (very sound objections too) may be obviated by adopting the following suggestion :—I shall be best understood by general readers if we suppose a continuous row of buildings are standing in line, and then every alternate block to be moved back until its front be in a parallel line with the back of the line it was taken from. The space they occupied to be laid out with fountains and shrubs, with carriage drives around them to give access to the rear blocks of buildings. All the blocks should be three stories high, exclusive of basement. The front of the basements might be fitted and let as shops or offices, but only to a depth of one room back ; the remainder to be devoted to coach-houses, stables, cook-rooms, &c. The stables of Apsley House at Hyde Park Corner are made beneath that mansion ; why should we not do the same here ? All fear of effluvia rising so as to enter the windows of the upper floors, can readily be prevented by building a large central ventilating shaft in certain centres of each block. These shafts can be carried a few feet above the roofs, terminating in handsome imitation (or why not import real) *terra cotta* chimnies. By building the blocks in hollow squares, with a fountain and shrubs in the centre, you ensure perfect ventilation in all the rooms of each block, grateful shadow from the sun, and look around where you may the eye would always rest on something to gratify it. The ground sacrificed by retiring the alternate blocks would be compensated by the space saved by having the stables on the basement floor, and by carrying the buildings a story higher. Any one who understands the science of ventilation will readily see that by having only

an entrance door open and all other windows closed, that all effluvia, &c., must go up the ventilation shaft: it *cannot* reach the only basement opening (the door), as the draft of a ventilating shaft, some 90 feet high, will be too strong to admit of it. Although I propose to appropriate the basement floors for stables where stables are needed, yet the rooms will all be suitably built for domestic or trade purposes, and, therefore, we should only have to turn out the equine tenants, and after a due course of disinfectants and a maund or two of quicklime strewed on the floors the rooms would be equally adapted for human occupation.

I think there must be some error in supposing that the engineers who are employed on the Executive Committee would think of cramping their designs by sticking buildings opposite the miserable little road running nearly parallel with the ramparts. There should be no road less than 100 feet broad in Frere Town, fifteen feet on each side for footpaths, with a row of bender trees, and a two-feet trench of clear cool water bordering them, thus leaving seventy feet for a roadway, which is not a bit too wide even for a second-rate street in a place like Bombay, where every second man drives a vehicle.

The open side trenches would have a marked effect in keeping the air cool; and men with scoops, like those used for wetting boat sails, could keep the roads watered at a trifling expense. With all the talent and taste of Bombay on the Committee we cannot but expect that something in the shape of elegant usefulness will emanate from them to shame the ancient ugliness of Bombay, and chase away for ever the horrible old tiled barrack abominations around us on every side. By the beard of Mustapha, I should be ashamed to build a dog kennel in the Bombay barn style when touches of taste and beauty cost less money. Nevertheless committees *can* commit atrocities in the brick and mortar line, as witness the Mechanics' Building now called Albion Place. Here was a chance for giving a beautiful pile of building to Bombay utterly thrown away. The site was one for display, and the very size and contour of the site suggested a hollow square, with an open face to the north, near from which point our Byculla sea-breezes blow. Thus, in lieu of building the first block on the eastern verge of our ground, and after a while a second angle parallel with the Mount Road, with a succeeding wing parallel with the Parell Road, thus forming the three sides of a square, with well laid out central garden and fountain, and which would now have harmonized so nicely with the Botanical Gardens which it overlooks; in lieu, I say, of some such plan as I have sketched out, the present bald block was plumped into the middle of this beautiful site, where it now stands in its naked ugliness as a monument of a committee's taste, and as a bar to any future improvement being exercised in devising future buildings to accord with the present, to accommodate our countrymen with house-room. I have only to add that my suggestions do not touch on the large squares, where, I imagine, the Government will not only build their offices, but make the interior of such oasis of leafy beauty; and, may be, perhaps, leave room for a pedestal for the statue of the future Grainger of Bombay.

Bombay, 8th May 1863.

TOM CRINGLE.

THE ROMAN BATH—I.

SIR.—The re-establishment of baths in England, though late in the day for this age of medical science, is still creditable to her common sense. The wonder is, that they should ever have gone out of use from amongst a people like the English, proud, orderly, and cleanly. The baths of Somersetshire are said to have been in use eight centuries before Christ. Baths were household words in London in 1679, as witness Old-bath-House, Cold-bath Square, Old-Bath Fields, Bath Street, &c. The baths now revived, called Turkish baths, should more properly be called Roman baths. In the Turkish bath the bather is treated with the liquid hot bath, so enervating to the constitution, whereas in the Roman bath the patient is first conducted into a hot-air bathroom, where he reclines on a divan and perspires rivulets of foulness from his system. In fact it is here, and here only, that he undergoes the curative operation. The other processes are mainly to fit him to enter the outer world again. In the hot air chamber he is subjected to a temperature of 160 deg. Fahr. and upwards, from whence he is ushered into what we may call the saponaceous department! It is here that the operator applies the "soft soap"—of commerce, not of flattery! Why do we use soap in washing our hands and faces? For the well-known reason, that with the dirt on our persons there is an unctuous deposit which has exuded from the skin and combined with the dust of the road which only soap or other alkaline substances will remove. The profuse perspiration induced by the hot-air chamber leaves such an unctuous coating on the skin that soap alone will remove it. This operation performed, the patient, brimful of caloric, is treated like a conflagration; he is played on by the operator with a rose hose, which rains on him a deliciously soft shower of cold water; the herculean robust prefer dousing with the bucket. This treatment gently closes the gaping pores of the skin; the patient is then enveloped in a sort of ghostly sheet and ushered into the — I forget the name of this room, but it ought to be called the Hall of Paradise, where, on a luxurious spring couch, our patient sinks into that calm feeling of ineffable enjoyment which only lotus-eaters know of; he quaffs his Mocha or enjoys his Havanna in a state of mind that dreams not of bankruptcy, though prices of cotton are sunk to zero and shipments be afloat! This may be called luxury, and so it is, but of the right sort, as it keeps the system clear of foul humours, oils the rusty hinges of the brain, unlocks the cockles of the heart; and, like Dave Carson, takes the wrinkles from dyspeptic livers by inducing joyous thoughts and feelings. The Roman bath is now beginning to be highly valued by the medical faculty at home. Wonderful cures are now effected by the aid of this beneficent agent, which refused to budge under fire of the *Materia Medica*. Cases of chronic dysentery are cured by the Roman bath in two or three visits. A medical writer truly says:

" Experience of this potent agent teaches that at temperatures over 160 deg. infection is destroyed, fever is conquered, fermentation stayed. By promoting the free action of the skin, inducing the emunctories of the body to perform their functions unimpeded,

"decarbonising and oxygenating the system, and recharging the body "with the electric fluid, the Roman bath destroys disease and renews "vitality."

Thus a fever patient may be taken to the bath half-dead in a palkee, and if it please him prance back on a war-horse. It is a bath of precisely similar character that is used by the robust Russian peasantry, but in this case he rushes from the hot bath and rolls in the winter snow. Is this blessing to lie idle, my masters, for want of an advocate! Have we no Mecænas like Mr. Cowasjee Jehangir Readymoney (happy cognomen), who built the noble hospital at Surat? Will another patriotic spirit arise and build this proposed Temple to Hygeia and thus hand his name down to posterity as the introducer of the Roman bath? I feel confident that this beneficent agent is not to be lost sight of. Some one of money, might, and influence will surely take it up. I personally feel a deep interest in this noble scheme, having an impish twitch of rheumatism now and again in the left hip, which I know the Roman bath will call forth and destroy, but left to work its will what a tyrant it will become! The Government are most deeply interested in this question with reference to their European troops. At Poona they should have their military Roman bath, where, if necessary, attendance should be compulsory; it would, I feel assured, work most beneficially on their general health, and in diarrhoeatic seasons would prove an able agent on the doctor's side.

The stalwart, courageous Roman soldier had his bath wherever he planted his victorious standard. Did he owe to this agent his immunity from the devastating diseases which ever accompanies the modern soldier? I firmly believe so. But the Roman was only a borrower from the Greeks of the bath now called Roman. When the bath was most in use amongst the Greeks they were on the very pinnacle of their national virtue, art, science, courage, and manly beauty.

To show, by analogy, that the Roman bath has a most curative effect on dysentery and other visceral complaints, how many of us have gloated on the pleasure a holiday to Poona would afford? Let us suppose a man enjoyed fair health in the moist warm air of Bombay. He arrives at Poona in the evening, dines, chats the time away, and goes to bed. The next morning he enjoys the cool dry air on the skin, but somehow or other he experiences a fullness of blood to the head; he can't walk so far as he intended, and the next morning he has relaxed bowels, which in two days after drives him to the doctor, and in some cases, if a speedy retreat is not made, he will be driven in the black omnibus to his grave. In 1827 I saw two hundred fine recruits swept into the grave from inaction of the emunctories of the body, which induced diarrhoea and dysentery. Is this to be wondered at when in Bombay we are always in—not the invigorating Roman, but the enervating Turkish bath? This keeps the system tolerably clear until we rush into the cool, dry air of the Deccan, when the pores of the skin are suddenly closed, and the whole sewage work of the body thrown on the kidneys. And suppose you havn't any kidneys! nor liver! with perspiratory ducts clogged for want of a little "oil of bath," what is to become of you? Do you know that all your friends who have

died so suddenly in Poona, died from want of this beneficent friend that you have kept so long aloof from? Ask your doctor if it is not true, though as an outsider I may not be able to describe it so learnedly but yet so that you can comprehend it. I shall say no more, although I could fill a volume detailing the benefits to be derived from the Roman bath.

Many of us are getting very rotund about the midriff. And although jolly Falstaff is very good fun on the stage, or seeking entry into a crowded omnibus, yet don't forget, my fat friends, that obesity is a disease which, although very pleasing to acquire, yet is difficult to get rid of. But don't despair; there is balm in Gilead. Establish the Roman bath and you get the unctuous coating drawn off like ghee from a dubber. But, seriously, the use of the Roman bath would save many useful lives, would obviate the necessity for many men leaving their business to go to Europe for the recovery of their health, and spare the loving wife the anguish of parting from husband and children for the same object.

Bombay, 3rd March 1863.

TOM CRINGLE.

THE ROMAN BATH—II.

SIR,—Your correspondent “Water Cure,” although he appears to doubt the efficacy of the Roman bath as set forth in my letter of the 23rd March, yet he evidently believes in its curative virtues by recommending its adoption for the use of military hospitals. The writer is evidently a medical man, and a courteous one. But although he doubts the truth of my assertion, that “the stalwart, courageous Roman soldier always established his bath wherever he planted his victorious standard,” yet he does not disprove it; whereas I have, on my side, the brick and mortar evidence revealed in the earthed-up Roman stations wherever discovered. Again, he instances the Turks to show that the bath is enervating. But I doubt whether they would not have gone down hill to decay much faster than they have done, had not the Roman bath been in such constant use amongst them. I attribute their decadence to other causes than the use of this bath. A man with no occupation for his mind, or work to inspire energy and give vigour to the system, and who lounges about all day smoking nerve-intoxicating drugs, with consequent weak appetite and weak digestion, cannot but be racing down the hill of life, without making the bath a *particeps criminis*. Our athletes do not keep harems with ten wives like the Turk, whose investments in the Circassian stock market are not made without a heavy discount on his bills drawn on the bank of Hygeia. I speak here only of the upper, or ruling, classes; the peasants, and especially the porters of Constantinople, are spoken of by all travellers as the strongest and most stalwart race in Europe, yet these also use the Roman bath. Your correspondent also leaves it to be inferred, that I meant a man should take the bath as regular as his breakfast, which I by no means do;—where's the skin to come from? In 1845 I was fellow pas-

senger from Suez with the late Sir James Outram, and in a conversation with him I was much struck by his recommending me to use baths as hot as I could bear them—not idle wallowing bathing, but coupled with plenty of soap and a long "backstrapper." I listened attentively, but secretly determined to adhere to the "invigorating cold bath," which I did for months, but found myself listless, sleepy, and growing weaker daily. I then tried Sir James' hot bath with the most marked benefit, and have always enjoyed the most robust health. Yet what is this but an imperfect approach to the Roman bath? Let me add, that when the weather is at the very hottest I enjoy the most perfect health, which I know is caused by the pores of the skin being active and open. But I do not wish it to be understood that I recommend hot baths at all seasons of the year. In our coldest Indian season (if the climate be bracing) I should prefer cold bathing, with an occasional visit to the Roman bath for the purpose of getting rid of the natural impurities of the outer skin, which cold water will not do. I believe the rule should be, hot baths for hot climates, and iced baths for Siberia. I have no doubt that a vast amount of ill-health is incurred by persisting in the use of cold bathing by persons whose habits or occupation are sedentary.

I agree with your correspondent that the Roman bath should not be taken by invalids; but I still adhere to my opinion, that the use of the Roman bath in India would save many lives and vastly promote health, especially amongst people of dark complexions, who, if I am not much mistaken, are far more liable to hepatic diseases than the fairer Anglo-Saxon.

Bombay, 11th May 1863.

Tom Cringle.

THE ROMAN BATH—III.

SIR,—I was much interested by reading an article in the *Times of India* of the 25th instant on the use of ipecacuanha in cases of diarrhoea and fever. Now, as this drug exerts a most powerful action on the skin, what is it but an artificial, sickening, disagreeable approach to the Roman bath? If I send my Bombay cotton-wearing servant to the Deccan in the cold season, he is nearly certain to be laid up with fever. A strong emetic is a sure cure. Here is the Roman bath again, with ipecacuanha for the exciting medium on the skin. When a doctor is anxiously watching a fever patient, in whose system Dame Nature has lighted the fire of restless heat for her Roman bath, she has terrible hard work to get the steam up so as to unseal the closed pores of the skin; but when she has effected it, our friend and the patient perspires freely, the doctor calls for his umbrella, and goes home rejoicing that his patient is now safe. But Nature's laborious efforts to accomplish this saving effect, in which effort, like a bad engine driver, she nearly burnt the boiler, the Roman bath would accomplish in ten minutes, and would give pleasure in lieu of pain in the operation.

In January, 1846, Mr. Chapman and myself were encamped on the summit of the Malsej Ghaut, when Mr. Conybeare joined us with bad fever caught coming through Concan jungle. We had no doctor, and

although I had drugs which I used to expend in little hillocks on the protruded tongues of gratified patients who entertained a false faith in my medical skill, yet to sport thus with the son of a dean was not to be thought of. At this time Priesnitz, the reviver and father of the present system of cold water cure, was at the highest pinnacle of his fame. I had read his book, had great faith in his system, and as a *dernier* resort proposed to Conybeare that I should "pack" him up in wet sheets. As he had no choice of course he assented. Having performed this operation as skilfully as a Melton bath man, and then mummyfied him in blankets, taking the precaution of putting plenty of water in his boiler in the shape of two jorums of cold water, I awaited the result with the inward fear of a quack but the outward demeanour of a Brodie. For twenty anxious minutes I would inquire, with the air of injured professional reputation, whether he could feel the wished-for perspiration oozing from the sealed-up pores. The answer, a doleful, despairing shake of the head, and an unmistakeable want of faith in his doctor. But I knew that having the water in his boiler, and the fevered blood acting the part of the heated chamber or *calidarium*, with the hot moisture from the wet sheets acting outwardly, that the desired effect *must* ensue, I bided my time, which extended to the expiration of the aforesaid twenty minutes, when my patient *thought* he felt the perspiration, then he was *sure* he did, and in a few minutes more he described the feeling as if rivers of fluid were pouring through the now unsealed pores of the skin. After a while I sponged my patient with tepid water, rubbed him with towels, and clothed him in cool raiment, and to show the merits of my medical, or, I should perhaps say, hydropathical skill, *he wanted to go out shooting next day!* But having tasted the sweets of power I forbade this, gave him light doses of quinine for two days, and he was himself again. I wonder whether the great Vehar engineer (clever man, but half educated engineer) recollects this incident. I somehow think he must have had a return of this fever accompanied with *delirium tremens* about the time when he laid the Vehar Water Main on the west side of the railway line, such being the reverse side to where the consumers are located, to say nothing of its being distant from a quarter to one mile along a great part of its course, so as to make it impossibly dear to lead the water to service! But although the Vehar water has a great deal to do as an agent in our Roman bath, yet I only wanted to point out that all present remedial measures for curing fever, and many other diseases, are chiefly weak efforts for obtaining a cure by Nature's labour throes, when, in the Roman bath, we have a beneficent agent acting in unison with Nature, and seconding her efforts to obtain health without having to pass through the crucible of pain in securing it.

Bombay, 26th May 1863.

TOM CRINGLE.

INDIAN TRAMWAYS.

SIR,—Your contemporary the *Bombay Gazette* of the 1st April gives a long and interesting leader on the above subject. Amongst

other *pros* and *cons* on the width of gauge proper to tramroads in connection with railways, the editor quotes Mr. Edmond Sharpe, of Lancaster, in what he calls a very able "Letter on Branch Railways, addressed to Lord Stanley of Adderly, President of the Board of Trade," wherein he (Mr. Sharpe), in my opinion, displays profound ignorance on the subject he is writing on. Mr. Sharpe says that the gauge for tramroads should be three feet. But the more enlightened Indian Tramway Company propose a gauge of three feet six inches for the Gogo and Ahmedabad road. But there are some wise men of Goshen who think that a 2-6 gauge ample! Will Mr. Sharpe tell me where his narrow rail-like trucks on a three-feet gauge would be when going round a sharp curve, with a strong wind a-beam, loaded, say eight feet high, with cotton dokras? Why, the train would roll over on its back with the truck wheels spinning round like mad teetotums. The five feet six inches railway gauge should be the very width I could imagine they would have battled for, if the present railways had been limited to the stupid gauge he recommends. I deny that an increased gauge would cost more for maintenance than the three feet one, considering the vast benefits it would confer. I also deny that the broader gauge would require a stronger rail if it had to carry the same load, or even a moderately greater load, as the broad base would ensure a steady motion. In like manner the sleeper, although it would of course require to be longer, it need not be of larger cross section. The cuttings and embankments would be more expensive, but the benefits to be derived from a broad gauge in carrying so bulky an article as unpressed cotton dokras would well repay the difference of cost. I think the Bombay Government have taken a most enlightened view, no doubt guided by the lamentable error of "*The Gauges*" in England. Many tomes might be written in favour of uniformity of gauge between railways and the proposed tramways. The day will surely come when the infant tramroad will increase in bone and muscles owing to a good carrying trade, and will most assuredly convert the modest tramway into a full blown railway, differing only from its more gigantic relation in adopting lighter engines and carriages.

The selected districts for laying down tramways are, as a matter of course, even more fruitful than the straight-a-head parent line, and the carrying trade must in time force the tramway to blossom into a regular railway worked by locomotives. But if they start at first as a three-foot grub, how will they ever take heart to expand into the railway butterfly state, clogged, as they would be, by a large mass of unsuitable and worthless stock? It would be well for the Bombay Government to allow these suicides to have *one* branch tramroad established on their darling three feet gauge! Let me advance one argument which all can appreciate, as it lies at our doors as it were. I am of opinion that it would be a good paying scheme to lay down a tramway from the G. I. P. Railway to the Mhyjee Fair, when we reflect on the hundreds of tons which would go over it, to say nothing of the vast number of passengers. The distance is only twenty-two miles, and the land as flat as a bowling green. Now, instead of having a costly rolling stock of three feet gauge, the waggons of the G. I. P. R. could be run on the tramroad up to the heart

of the fair without the Tramway Company needing anything more than some half dozen Irish jaunting-car sort of *lorries*, and a nimble Deccan tattoo to run their passengers from end to end of their line.

The fact is, all England had suddenly gone mad about making tramways in India for something less than nothing ; and now that Mr. R. W. Graham, the Chief Resident Engineer of the G. I. P. Railway, has dispelled the illusion by his admirable official letter to the Government when called on to report on their presumed fitness for the work proposed to be done, the admirers of the three feet tramways don't like the "taste of their leek."

The tramroad companies will yet thank Mr. Graham for his able letter on the advisability of making tramroads on the 5-6 gauge. Every argument he uses, is as firm and unshakeable as adamant, and he may defy with a calm front future events to give him the lie.

3rd April 1863.

TOM CRINGLE.

GALLE IN 1863.

I AM tempted to give you a few inklings of this place, notwithstanding a capital letter from one of your correspondents, about six months ago, nearly exhausted the subjects that a passing stranger can write about. Let me first say that, from the time when we left Bombay, in the P. and O. Company's S. S. *China*, at 9 A.M. on the 29th ultimo until we arrived here, we had fine, gentle, trade-wind-like breezes with studing sails alow and aloft. For a short time the wind even shifted ahead on a S. S. E. course. I merely mention these trivials to show that at this time of the year the monsoon is quite local in its action. We arrived off this port at sun-down, consequently too late to go in : so boxed about till daylight, when we discovered the *Malta* with the mails from Suez. The pilots of this port are the easiest going mortals I have ever known ; time is of no moment to them, if one may judge by the time they take in boarding ships. There is no doubt but that this port might be made a good snug harbour if the convict labour, of Western India were concentrated here to work for a few years, in lieu of employing expensive freight to send them on an aimless work-errand to our more distant colonies. The entrance is contracted, and must, I think, always remain so ; but as it is straight, and the passage between the reef short, it is devoid of all danger to steam ships ; and, as the usual sea breeze must be on the quarter or beam, sailing vessels are pretty well under command. The eastern side of the harbour, as being the largest, offers the best site for protecting by a breakwater, although farthest from the town, which latter, no doubt, took its growth from its more ancient predecessor in the old times, when only a few Arab buggalows used to visit it annually. A breakwater could be easily made here, as it would have the living reef as a windward base, and the harbour is not overdeep to increase the magnitude of the work. The rise and fall of tide is only some two to three feet ; therefore a couple of lines of railway, with three ballast locomotive engines and tip waggons, would complete the work in five years if the labour was well organized.

Good warm barracks should be built for the convicts, who should be well and nourishingly fed and warmly clothed ; and by the beard of Mustapha, with these encouraging accessories, they should work, and work hard too ! I would allow them tobacco and many indulgences for good labour, and, above all, the suicidal policy of expecting work—good, hard, honest work—from half-fed, half-clothed, half-housed, broken-down wretches, would prove degrading to a practical mind. Good conduct (*i. e.* hard labour) should entitle such of the convicts as were not heinous felon to a free pardon on the termination of the work. It is possible also that rock cuttings thrown to spoil on the Ceylon Railway, if at all handy, may be made available. The expensive convict colony on the Andamans might be more profitably employed on a noble work of utility which would last to the end of time, than keep sentry of their pumpkin plats there, leading an aimless life, if we except the torture of human hearts. Were I a convict to-morrow I should despise a government who did not employ my labour on profitable and durable objects. How I should like to have a tyrant's power !

The usual style of building here puts me in mind of those in and about Mahim woods ; and as there are a large number of Portuguese here I dare say the style, or more properly speaking the absence of style, is due to them.

The first object which arrested my attention on reaching the shore were the materials for the lighthouse on the Basses. The granite foundation stones are cut from Aberdeen granite, and from the workmanship I do not think the Government erred in bringing them ready fitted from England, as the work would never have been executed here except at an enormous cost and endless time. The superstructure is iron, the same as the Galle lighthouse. After all, the lighthouse is not to be erected on the Basses, as it is so near a wash, with an ever restless sea, that great difficulties would have to be encountered in getting in the first foundation course. These difficulties would find a hundred conquering contractors in England ; but the people here have not the true conquering “ grit ” in them.

On first landing you are amazed at the apparent intermixture of the sexes, as both dress and wear their hair so much alike to the stranger's eye that it is only by the beard of the males which enables one to distinguish between the sexes. As for the boys and girls, they put guesses at sex at defiance. A friend and myself saw on the jetty one of these cases of doubtful gender in the person of a very pretty boy-girl, but after studying the subject a long time as to sex we gave it up in despair, and went on our way puzzled.

The hotels here are famous for high charges. The touters come on board before you land, and look at you askance, as if they knew they were “on nefarious thoughts intent,” and wore the well-known couplet on their breasts—

“ Will you walk into my parlour
Says the spider to the fly ?”

I should not say such hard things of them were it not for the infamous bread in use in this benighted place. The inner consistence exactly

resembles a badly made muffin ; only it is insufferably dirty, and so full of, not only sand, but genuine lumps of granite. No stranger teeth could bear the infliction after the first essay ; and I can only suppose that the European inhabitants tolerate it on the plea that it gives them a prescriptive right to demand leave of absence to England to undergo operation for "lithotomy." Any one coming to Galle for benefit of health, should bring his own flour and baker to make his bread, or implore the captain of the ship they land from to throw on shore a bag of biscuits. During my short sojourn of two days I put up at the Eglinton Hotel. It is prettily situated on the ramparts ; its rooms and beds are very clean, and its landlord very obliging ; he is also a very griffin in guarding passengers from being fleeced by the "curiosity box-wallas." By the bye, the following may be taken as a standard rule for dealing with these men. Half the sum they ask, and deduct fifty per cent. from the quotient ; the dealer will affect to be disgusted, but will, after a little toying and coying, part with the goods on the scale quoted. I think the air of Galle would be very beneficial to diarrhoeatic patients, especially those from the Deccan—the air warm without being hot, and comes fresh and fresh across the ocean.

We leave here at 5 P.M. to-day for Calcutta by the good and fast ship *Malta*. So good bye till you hear from me again.

Galle, 4th September 1863.

TOM CRINGLE.

AGRA GARDEN AND BANDSTAND.

We are much indebted to "Tom Cringle" for a very excellent suggestion in to-day's issue, to which we solicit the attention of the Municipal Commissioners. It is scarcely within the bounds of possibility that Agra should be the first Station to take in hand any such improvement, but the suggestion will very likely be found useful and may be adopted at Delhi and Lucknow.

To the Editor of the Delhi Gazette.

SIR,—Will you permit me to make a few remarks on the subject named in the heading of this letter ?

It is nearly a truism to say that the Terraced Bandstand in the midst of the beautiful garden which surrounds it, does great credit to the taste and public spirit of this city ; but I think there is an essential something wanting that would crown the whole space with beauty and verdant freshness, and which would not be beyond the municipal means of Agra, and would, in your comparatively rainless climate, be a very grateful retreat from your dusty roads and heat-saturated houses. I would suggest a fountain in the middle of the Bandstand, forty feet diameter and eighteen inches deep. The bottom of the fountain should be on a level with the present surface of the ground, and the overflow from it would feed four smaller fountains quadrilaterally placed at the base of the terrace. The bore of the jet for the large one, should be *one inch*. For the small ones, a quarter

inch would suffice. The smaller fountains should be ten feet diameter and twelve inches deep, with the lip of the basin level with the ground. Your readers will probably be asking all this while, "Where the water to feed the fountains is to come from?" which I will now explain. Build a square tower over the present draw-well thirty feet high from the ground and ten feet square, on which erect a cast-iron tank such as the railways use,—they are in plates four feet square, with angular-plates, and plates for the corners. Thus a tower, ten feet square, would carry two tank-plates on each face of the square, besides the angle-plates. The whole of the plates are of cast iron, bolted together, and the joints filled with iron borings mixed with salammoniac, which rust and form an impermeable joint. Thus what would be wanted is as follows :—

	Weight. Tons. Cwt.
12 Four feet square C. I. Tank-plates	2 8
8 Angular-plates	0 9
4 Corner-plates	0 5
4 Stay Rods and Bolts, say	Rs. 30
200 Tank-bolts, say	,, 40
2 Cwt. <i>cast-iron</i> borings, say	,, 10
20 lbs. Salammoniac	,, 60
	<hr/>
	3 20

The Tank-plates would cost at Rs. 10 per }
cwt., about } Rs. 620

For erecting Tank, say ,,, 150

To one double-action Force Pump, with }
pipes } Rs. 910

Pipes, Galvanized for Fountains, say ,,, 600

Fitting Pumps, Pipes, &c. ,,, 500

Total Rs. 2,160

Should any member of the Municipality be acquainted with any of the Railway Engineer officers at Calcutta or Allahabad they would put them in a way to get these articles, and supply them with a man to erect them. Although the list of articles looks rather formidable on paper, they are every day things on railways, and are easily erected, and will last for two centuries without even looking to. Wrought-iron tanks would quickly corrode, but the corrosion of cast iron is inappreciable. Such a tank as I have described would hold about 2,500 gallons, which I think would serve the main fountain during the time the gardens are visited in the evening. If the tank was raised four feet higher by bolting on eight additional four feet square plates, it would contain double the quantity of water, and it would increase the pressure on the

fountains according to the square of the root on the original, or first height thrown ; but it is scarcely desirable to throw water very high for a fountain, as it is more elegant to have a pretty convolvulus jet, or other handsome pattern than to have a straight jet of water. It must not be lost sight of that the overflow from the large fountain will supply the smaller ones, and the overflow from these may be made to irrigate turf surface, or it may fall into surface dipping cisterns for the use of mallees. In connection with the—say $1\frac{1}{2}$ inch—feed-pipe, leading to the large fountain, there should be a low stand-cock, on to which the gardeners could screw a one-inch vulcanized India-rubber hose with spreader nozzle, with which to water all the turf and shrubs in the vicinity, or rather within the capacity of the hose. We have all these things in Bombay, or I may say, that I use them every day in my own compound, in which I have two fountains. I merely mention this to show that all is easy and simple if the effort be only made. The tower, on the top of which the tank is to be placed with the pump in the interior, would perhaps not look very sightly without much money were spent to give it architectural expression, but happily this is not necessary ; let the sides of the tower, from the ground to the top edge of the tank, be rough latticed either with teak or other durable wood battens, two by half inch, or even by stout galvanized wire, and then planted with creepers, which will run up and clothe the sides, make it look like one of our old ivy-clad church steeples in England. These remarks may possibly be of service to other stations where the same suggestions would apply.

Agra, 28th October 1863.

TOM CRINGLE.

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